Edd Clark & Associates, Inc.
Environmental Consultants

April 14, 2006
Job No.: 0369,001.00

Rodney and Georgia Miller Irrevocable Trust
% Gayle Veale
416 South Oregon Street
Yreka, CA 96097

Report:
HVDPE Soil & Groundwater Remediation Report
198 High Street
Sebastopol, California

Dear Ms. Veale:

Please accept this as Edd Clark & Associates, Inc.'s (EC&A's) report of High Vacuum Dual Phase Extraction (HVDPE) remediation in the vicinity of the former underground storage tanks (USTs) for gasoline and diesel at 198 High Street (site) in Sebastopol, California (Figure 1). The purpose of the remediation was to extract free-phase floating product (if present) and groundwater with high concentrations of fuel hydrocarbons (FHCs) and to volatilize and extract FHCs adsorbed to soil in the vicinity of the former USTs. HVDPE was selected as the preferred remediation technology because, as demonstrated by the pilot test, it would be effective in remediating FHC-impacted soil and groundwater in a short time frame and it would not disrupt business operations to a significant extent. In their letter dated July 11, 2005, the County of Sonoma Department of Health Services (CSDHS) concurred with EC&A's recommendation of HVDPE as the preferred remedial alternative for the site. A copy of this report will be submitted to the CSDHS and the North Coast Regional Water Quality Control Board (NCRWQCB) for their review.

COMPLETED SCOPE OF WORK

The completed scope of work includes the following activities:

- Acquisition of an extraction well installation permit from the CSDHS; a discharge permit from City of Santa Rosa for discharge of the treated extracted water into the Santa Rosa Subregional Reclamation Facility sanitary sewer system; and a temporary-use permit from the City of Sebastopol for HVDPE operation;
- Installation and development of two groundwater extraction wells in the vicinity of the former USTs;
- Collection of soil samples from the extraction wells for chemical analysis;
- Collection of groundwater samples from the extraction wells and existing monitoring wells for chemical analysis prior to the HVDPE event;

- Performance of a 33-day HVDPE extraction event of groundwater and FHC vapors from the extraction wells and existing monitoring well MW-5;
- Collection of samples of soil gas and effluent water during operation of the HVDPE system;
- Removal of approximately 795 pounds of FHCs;
- Disposal of approximately 117,640 gallons of treated FHC-impacted water under permit to the City of Santa Rosa Subregional Water Reclamation System and destruction of vapors in a thermal oxidizer;
- Collection of groundwater samples from monitoring and extraction wells for chemical analysis in November 2005 after the conclusion of the HVDPE event; and
- Preparation of this summary report.

BACKGROUND

Site Description

The site is located in a residential and light-commercial neighborhood in the city of Sebastopol; the nearest cross street is Burnett Street. Earth in Upheaval, an automotive-repair facility, occupies the site. A residence is to the east, Ives Park is to the south, and a business is to the north. The ground surface in the vicinity of the former USTs slopes toward the east and south. A creek flowing toward the east through a concrete-lined channel is about 30 feet (ft) from the former USTs. The creek, which appears to be man-made, drains a small duck pond in Ives Park. The ground surface in the area of the former USTs is gravel.

Two USTs, one 1000-gallon UST for diesel and one 500-gallon UST for gasoline, were located near the southern property line adjacent to Ives Park (Figure 2). The USTs were located end-to-end with the gasoline UST occupying the western end of the excavation. Reportedly, the USTs were installed around 1946, were last used in about 1972, and were abandoned in-place under permit issued by the CSDHS by filling with sand in 1985.

Summary of Previous Work

UST Removal

On July 22, 1999, the USTs were removed by the Fuel Oil Polishing Company (FOPCO). Several holes were observed on the top and bottom of the former UST for gasoline; holes were also observed on the top of the former UST for diesel. Odorous and discolored soil was present in the UST excavation. The highest concentrations of TPHg (300 milligrams per kilogram [mg/kg]) and TPHd (46 mg/kg) were reported from overburden soil stockpile sample OS-1. Table 1 presents the soil sample analytical results.

Preliminary Site Investigation

On July 6 and August 9, 2000, EC&A directed the drilling of onsite soil borings B-1 through B-4 to approximately 18.0 ft to 21.5 ft below ground surface (bgs), and offsite borings B-5 and B-6 to 16.5 ft and 17.0 ft bgs, respectively (Figure 2). EC&A's October 5, 2000, *Preliminary Site Investigation Report* provides additional information on the July and August 2000 investigation.

Sensitive Receptor Survey

On June 8 and 11, 2001, EC&A performed a Sensitive Receptor Survey (SRS) to identify municipal wells, groundwater plume receptors (private water-supply wells, surface waters, etc.) and petroleum vapor receptors (utility vaults, etc.) in the vicinity of the site. In addition, a historical well-data search was performed by the Department of Water Resources (DWR). Two municipal wells were identified within a ½ -mile radius of the site. The DWR and EC&A did not identify any private water-supply wells within a 1000-ft radius of the site. Results of the June 2001 SRS are presented in EC&A's August 31, 2001 *Report of Additional Soil and Groundwater Investigation and July 2001 Groundwater Monitoring*.

July 2001 Soil and Groundwater Investigation

On July 2 and 3, 2001, EC&A directed the installation of monitoring wells MW-1, MW-2 and MW-3 and the advancement of exploratory soil borings B-7, B-8 and B-9 (Figure 2). Soil and well boring soil sample results are in Table 2, soil boring grab-groundwater analytical results are in Table 3, and monitoring well groundwater sample analytical results are in Table 4. EC&A's August 31, 2001, *Report of Additional Soil and Groundwater Investigation and July 2001 Groundwater Monitoring Report* provides additional information on this investigation.

July 2002 Soil and Groundwater Investigation

On July 26, 2002, EC&A personnel directed the installation of two-inch-diameter groundwater monitoring wells MW-4 and MW-5 to 25 ft bgs (Figure 2). FHCs were only detected in soil samples collected from MW-5. Soil sample analytical results are in Table 2; groundwater sample analytical results from the monitoring wells are in Table 4. EC&A's September 20, 2002, *Monitoring Well Installation and August 2002 Quarterly Monitoring Report* provides additional information on this investigation.

July 2001 through July 2005 Quarterly Groundwater Monitoring

Water-level data collected quarterly from July 2001 to July 2005 indicates that the groundwater-flow direction has been northerly with slight easterly or westerly components. MW-2 has consistently been in the approximate down-gradient direction since groundwater monitoring began in July 2001.

Groundwater samples have been analyzed for total petroleum hydrocarbons (TPH) as gasoline (g), TPH as diesel (d) and benzene, toluene, ethylbenzene and xylenes (BTEX) using Analytical Methods SW8021B/8015Cm and for methyl tert-butyl ether (MTBE) and other gasoline oxygenates and lead scavengers 1,2-dibromoethane (EDB) and 1,2-dichloroethane (1,2-DCA) by Analytical Method SW8260B. Analysis for gasoline oxygenates and lead scavengers was discontinued in 2003 because these analytes have not been detected in the monitoring wells.

TPHg has been detected only once in MW-2, MW-3 and MW-4; the maximum concentration was 120 µg/l (MW-3, July 2005). TPHg concentrations in MW-5 have declined from 1100 micrograms per liter (µg/l) in August 2003 to 66 µg/l in July 2005. In EW-1, TPHg was detected in July 2005 at 3500 µg/l; EW-2 was ND.

TPHd has not been detected in MW-1 through MW-4. In MW-5, TPHd was detected in four of the eight times it was analyzed for, with concentrations ranging from 71 µg/l in November 2002 to 140 µg/l in August 2002. The laboratory noted that "gasoline compounds are significant" for all four detections, indicating that detected FHCs probably are degraded gasoline.

Benzene was detected three times in MW-1, once in MW-4, and ten times in MW-5 at a maximum concentration of 13 µg/l (August 2002). Benzene was not detected in MW-5 in July 2005, the first event subsequent to the March 17, 2005 HVDPE pilot test on this well. Minor to low concentrations of toluene and/or ethylbenzene and/or xylenes have been detected in wells MW-1 through MW-5 (maximum of 50 µg/l xylenes: MW-5, August 2002).

MTBE, other oxygenates and EDB have not been detected in any of the wells. 1,2-DCA at 2.1 µg/l was detected in MW-2 during the July 2001 sampling event. Table 4 presents the monitoring well groundwater sample analytical results.

March 2005 HVDPE Pilot Test

A six-hour HVDPE pilot test was conducted on March 17, 2005, by CalClean, Inc., of Tustin, California, using a truck-mounted unit equipped with a 450-cubic-ft-per-minute (CFM) HVDPE system. Monitoring well MW-5 was used as the extraction well. Approximately 7.8 pounds of hydrocarbons (1.3 pounds per hour) were removed in the test. Approximately 510 gallons of water, or about 85 gallons per hour, were extracted during the pilot test. Data from the pilot test indicated that HVDPE would be an effective remediation technology for the site.

Complete details on the HVDPE pilot test are provided in EC&A's May 16, 2005 *Report: High Vacuum Dual Phase Extraction (HVDPE) Pilot Test.*

HYDROGEOLOGY

Three subsurface units have been encountered in soil borings drilled at the site (Figure 3):

- An upper layer of artificial fill that was about 1.5-ft to 2.5-ft thick in borings in the vicinity of the former UST excavation (B-1, B-2, B-3, B-4, B-5, B-6 and B-8) and 10 ft thick in the former excavation (B-10).
- A layer of alluvium consisting mostly of sandy silt and silty sand that is locally gravelly and clayey with iron oxide staining. The total thickness of the fill and alluvium was about 7-ft in B-1, 10-ft in B-2, 8.5-ft in B-3, 7-ft in B-4, 4-ft in B-5, 9-ft in B-6, 9-ft in B-7, 9-ft in B-8, 9-ft in B-9, 4-ft in B-11, 8-ft in B-12, 7-ft in B-13, 9-ft in MW-1, 7-ft in MW-2, 3-ft in MW-3, 7-ft in MW-4, 6-ft in MW-5, 8.5 ft in EW-1, and 9.5 ft in EW-2.
- The Wilson Grove Formation, a well sorted, very-fine to fine-grained sand and silty sand of Pliocene age containing marine pelecypod and gastropod fossils was encountered in B-2, B-3, B-4, B-8, B-10, B-11, B-13, MW-3, MW-4, MW-5, EW-1 and EW-2. In two borings (MW-1 and MW-5), the uppermost part of the Wilson Grove Formation is gravelly. The Wilson Grove

Formation typically is dense to very dense, with blow counts as high as 100 for 7 inches (MW-4 at 15 ft bgs).

Groundwater
Groundwater was encountered from 15 ft to 20 ft bgs in soil and well borings drilled during 2000, 2001 and 2002. In June 2004, groundwater was encountered at approximately 18 ft bgs. Depth to water (DTW) below the top of the well casings (TOC) has ranged from 14.78 ft (MW-3, July 2001) to 22.80 ft (MW-5, March 2005). The groundwater-flow direction and gradient in the vicinity of the former USTs for the groundwater monitoring events conducted to date has ranged from N13°W to N24°E and 0.006 ft/ft to 0.036 ft/ft, respectively. Water-level data are presented in Table 5. Figure 4 is a groundwater elevation map for November 7, 2005.

SEPTEMBER - OCTOBER 2005 HVDPE INTERIM REMEDIATION

From September 2 to October 21, 2005, under the supervision of EC&A, CalClean, Inc., conducted a 33-day HVDPE event. The purpose of the HVDPE event was to reduce FHC concentrations in soil and groundwater in the vicinity of the former USTs. To minimize the amount of water extraction necessary to dewater the formation and thereby expose more soil for the extraction of vapors, the HVDPE event was conducted during a period of seasonally low water-table levels. The HVDPE event was started on September 2, 2005; however, due to permitting requirements of the City of Sebastopol Planning Department, the HVDPE system was shut down on September 2, 2005 after approximately 6 hours of operation. Following the issuance of a Temporary Use Permit by the Planning Department, the HVDPE event resumed on September 19th.

Prior to performing the HVDPE event, two 4-inch-diameter extraction wells (EW-1 and EW-2) were installed in the vicinity of the former USTs (Figure 2). Groundwater samples were collected from the extraction wells and existing monitoring wells prior to and after the HVDPE event to evaluate the effectiveness of the HVDPE event. Site work was performed in accordance with EC&A's December 31, 2003 *Feasibility Study/Corrective Action Plan/Remedial Action Plan*, May 19, 2005 *Revised Feasibility Study/Corrective Action Plan* and July 1, 2005 *Revised Feasibility Study/Corrective Action Plan Addendum.*

Dual Phase Extraction Well Installation and Construction
On July 22, 2005, under permit issued by the CSDHS (Appendix A), EC&A personnel directed the advancement of two 4-inch-diameter extraction wells, EW-1 and EW-2, in the vicinity of the former USTs (Figure 2). The well borings were drilled to 30 ft bgs using a truck-mounted drill rig equipped with 10-inch-diameter, hollow-stem augers.

Drilling services were provided by Clear Heart Drilling, Inc., of Santa Rosa, California. Drilling was performed under the technical direction of an EC&A field geologist who classified the soils encountered, maintained a continuous log of the lithology and assisted in obtaining soil samples. All field work was performed under the supervision of a California-registered geologist. EC&A

personnel field screened the breathing zone and soil samples for organic vapors with a photo ionization detector (PID). Boring logs describing soil lithology encountered in each boring are attached (Figures 5 and 6). Soils were described using the Unified Soil Classification System (Figure 7) and Munsell Soil Color Charts.

Soil Sampling Procedures

Soil samples were collected from the extraction wells at a minimum of every 5 ft, at any change in lithology, any obviously contaminated soil and/or at the interpreted soil/groundwater interface. The soil samples were collected using a split-spoon sampling apparatus containing 2-inch-diameter by 6-inch-long brass liners. When a boring was advanced to the selected sampling depth, the drill rods were withdrawn from the boring and the sampler lowered into the bottom of the hole and driven approximately 18 inches into soil ahead of the auger with a 140-pound, drill-rig-operated hammer.

Soil samples intended for submittal to the analytical laboratory for analysis for volatile organic compounds (VOCs) were collected using an EnCore® sampler apparatus. Soil samples submitted for laboratory analysis were sealed, labeled, logged on a chain-of-custody form, and placed on ice for immediate transport to McCampbell Analytical, Inc., (MAI) for the required analysis. MAI is a state-certified laboratory in Pacheco, California. The second number in the sample ID is the depth, in ft bgs, from which the sample was collected.

Soil Sample Analyses and Results

Six soil samples from the extraction well borings (three each from EW-1 and EW-2) were submitted for chemical analysis. All the soil samples were analyzed for TPHd by Analytical Method SW8015C. The three samples collected from EW-1, as well as sample EW-2d16.0, were also analyzed for TPHg, BTEX and MTBE by Analytical Methods SW8015Cm/8015B.

TPHg was detected in soil samples EW1-d6.5, EW1-d11.0 and EW1-d16.0 at 7400 mg/kg, 16 mg/kg and 3.6 mg/kg, respectively. TPHd was also detected in those three samples at 570 mg/kg, 110 mg/kg and 4.3 mg/kg, respectively. BTEX compounds were detected in soil sample EW1-d6.5 at 7.8 mg/kg, 160 mg/kg, 86 mg/kg and 470 mg/kg, respectively. Minor concentrations of toluene, ethylbenzene and xylenes were detected in samples EW1-d11.0 and EW1-d16.0. MTBE was not detected in any of the soil samples; ND ranges were from <0.058 mg/kg to <5.0 mg/kg.

Analytical results for soil samples from borings are presented in Table 2. A complete copy of the analytical laboratory report is in Appendix B. The sample results will be electronically submitted to the State GeoTracker internet database.

Extraction Well Construction

Well borings EW-1 and EW-2 were converted into groundwater extraction wells by inserting a 4-inch-diameter PVC casing into each boring and backfilling the annular space with sand. The well screen consists of 0.020 inch machine-slotted screen. In EW-1 and EW-2, the well screen is from 10 ft to 30 ft bgs. The annular space was filled with #2/12 sand from the bottom of the boring to 8 or 9 ft bgs. About 3 ft of bentonite chips were placed in the annular space above the sand and

hydrated. Cement grout filled the remainder of the annular space to the ground surface where traffic-rated Christy boxes were installed over the tops of the wells. Extraction well construction specifics are shown on the boring logs (Figures 5 and 6).

Well Development
On July 25, 2005, extraction wells EW-1 and EW-2 were developed by surging and pumping groundwater from the well with a battery-operated, downhole PVC pump until the groundwater was relatively clear and free of sediment. Approximately 20 gallons were purged from EW-1 and approximately 40 gallons were purged from EW-2. Well development logs are in Appendix C.

Pre-HVDPE Groundwater Sampling Event
On July 29, 2005, EC&A personnel collected groundwater samples from MW-1 through MW-5, EW-1 and EW-2. All groundwater samples were analyzed for TPHg and BTEX by Analytical Methods SW8015Cm/8021B. Groundwater samples collected from EW-1 and EW-2 were also analyzed for TPHd by Analytical Method SW8015C.

TPHg was detected in groundwater samples collected from MW-3, MW-5 and EW-1 at 120 µg/l, 66 µg/l and 3500 µg/l, respectively. TPHd was detected in the sample from EW-1 at 290 µg/l; however, MAI characterized the TPHd concentrations as "gasoline range compounds are significant". Benzene was detected in EW-1 at 26 µg/l. Toluene, ethylbenzene and xylenes were detected in groundwater samples collected from MW-3, MW-5 and EW-1 at maximum concentrations of 300 µg/l, 75 µg/l and 370 µg/l, respectively (EW-1).

Analytical results for groundwater samples collected from the monitoring and extraction wells are presented in Table 4. Complete details of the July 2005 groundwater monitoring event are in EC&A's October 7, 2005 *Groundwater Monitoring Report-July 2005 Event.*

High-Vacuum Dual Phase Extraction
The 33-day HVDPE event was conducted by CalClean, Inc., using a truck-mounted unit equipped with a 450-CFM HVDPE system from September 19 to October 21, 2005. Extracted groundwater and vapors were treated in a propane-fired thermal oxidizer. Extracted groundwater was also polished in a trailer-mounted system equipped with carbon canisters prior to its discharge directly into the sanitary sewer system under a permit issued by the City of Santa Rosa Utilities Department Subregional Water Reclamation System (Appendix A). Any free product extracted by the system was volatilized and oxidized in a thermal oxidizer. The HVDPE system was connected to various combinations of EW-1, EW-2 and MW-5 while groundwater draw-down was measured in the surrounding monitoring wells.

A complete copy of CalClean's November 2, 2005 *HIGH VACUUM DUAL PHASE EXTRACTION AND TREATMENT REPORT*, which includes tables and graphs showing the concentrations and volume of extracted FHC vapors, extracted groundwater volumes, field measurements of system parameters and complete laboratory reports, is in Appendix D.

HVDPE System Procedures

During the HVDPE event, CalClean periodically recorded system parameters such as vacuum, temperature, vapor flow rate and the amount of groundwater extracted from the site. Groundwater drawdown/vacuum response in nearby monitoring wells were also periodically measured. An Horiba MEXA-324JU field analyzer, calibrated with hexane, was used for field measurements of influent hydrocarbon concentrations.

Discrete and/or combined vapor samples were collected at system startup, at approximately 5-day intervals and at system shutdown. Vapor samples were collected in Tedlar bags and submitted under chain-of-custody procedures to a State of California certified analytical laboratory. Samples collected on September 2, 2006 were analyzed by KIFF Analytical in Davis, California; subsequent vapor samples collected on September 23 and 28, and October 2, 3, 9, 14, 17 and 21, 2005 were submitted to Associated Laboratories in Orange, California for laboratory analysis.

Treated groundwater effluent samples were collected at system startup and after approximately every 30,000 gallons of extracted groundwater were discharged into the sanitary sewer. These samples were analyzed for TPHg and TPHd by Method 8015C, and BTEX and MTBE by EPA Method 8260B per the City of Santa Rosa Utilities Department Subregional Water Reclamation System permit conditions.

Groundwater Level Measurements and Stinger Depths

Groundwater levels were measured in all of the extraction wells at the startup of, and at the end of, the HVDPE event. The 1-inch- or 1¼-inch-internal-diameter (ID) stinger tubes were lowered to 2 ft above the bottoms of the extraction wells (23 ft for MW-5, 28 ft for EW-1 and EW-2). Additionally, depth to groundwater was also measured in nearby site monitoring wells during the operation of the HVDPE system.

Vapor Samples

At system startup on September 2, 2005, a discrete vapor sample was collected from EW-1, EW-2 and MW-5 after each well had been connected to the HVDPE equipment for three to four hours. A combined or composite vapor sample was also collected on September 2nd from the extraction wells after approximately four hours of system operation. These samples were analyzed for TPHg/BTEX/MTBE and other gasoline oxygenates by Method 8260B.

During operation of the system, discrete vapor samples were collected from EW-1, EW-2 and MW-5 on October 3, 2005 and analyzed for TPHg/BTEX/MTBE by Methods 8015/8021. Eight combined (composite) vapor samples were collected between September 23 and system shutdown on October 21, 2005. The samples collected on September 28, 2005 were analyzed for TPHg by Method 8015 and for BTEX and MTBE and other fuel oxygenates by Method 8260B; all other combined vapor samples were analyzed for TPHg/BTEX/MTBE by Methods 8015/8021.

Discrete vapor samples were collected from EW-1 and MW-5 at system shutdown on October 21, 2005 and analyzed for TPHg/BTEX/MTBE by Methods 8260B. A combined sample was also collected on October 21 and analyzed for TPHg/BTEX/MTBE by Methods 8015/8021.

Analytical results for the vapor samples are shown in Table 1 in Appendix D.

Groundwater Treatment

Groundwater extracted during HVDPE was separated out in the extraction system. Typically, about 120 gallons per day of extracted water was beneficially reused as make-up water. The remaining water was treated through an onsite treatment process. Most of the hydrocarbon contaminants were removed from the extracted water by use of air sparging and heating while under high vacuum in the inlet tank. The process-treated water was then transferred to a secondary treatment system, which consists of two carbon canisters in series. The treated water was then pumped into the sanitary sewer system.

A water meter was placed in-line to measure the amount of water being discharged, and a sample port was installed in the discharge line for periodic sampling in accordance with the requirements of the discharge permit. FHC-impacted groundwater was removed at the rate of approximately 2.5 gallons per minute, for a total of 117,460 gallons (Table 3 in Appendix D).

HVDPE Event Results

The 33-day HVDPE event lasted from September 2 to October 21, 2005. During this event, the total equivalent amount of hydrocarbons removed was 845.3 pounds based on laboratory data, and 745.7 pounds based on the Horiba field analyzer data, for an average of 795.5 pounds or 127 gallons (Tables 2 and 3 in Appendix D). The total volume of FHC-impacted groundwater removed was 117,460 gallons.

Vapor Sample Analytical Results

The highest concentrations of TPHg and benzene were reported in the discrete startup sample from MW-5 at 6000 parts per million by volume [ppmv] and 8.9 ppmv, respectively. At the end of the event, the TPHg and benzene concentrations in MW-5 had declined to 572 ppmv and 0.2 ppmv, respectively.

The highest combined vapor sample results for TPHg and benzene were measured at system startup at 3400 ppmv and 5.6 ppmv, respectively. At the end of the event, the combined vapor sample results for TPHg and benzene were 597 ppmv and 0.2 ppmv, respectively, (Appendix D, Table 1).

MTBE was detected in the discrete sample collected at the end of the HVDPE event from MW-5 and in the combined sample collected during the event on September 23, 2005 at 0.8 ppmv and 2.4 ppmv, respectively. However, both of these samples were analyzed for MTBE by Method 8021B. Because MTBE was not detected in vapor samples analyzed by Method 8260B and MTBE and/or other fuel oxygenates have never been detected in groundwater from site monitoring wells, it is likely that the vapor-sample MTBE results are false positives.

The results of the analysis of vapor samples are in Appendix D, Table 1. Figures 1 and 2 in Appendix D show total FHC concentrations over time and pounds of FHCs recovered over time, respectively.

FHC Vapor Field Measurements

Initially, wells MW-5, EW-1 and EW-2 were used for vapor extraction; their respective start-up TPHg concentrations were 2060 ppmv, 3560 ppmv and 42 ppmv, respectively (Appendix D, Attachment 2). On September 19, 2005, when the system was restarted, the TPHg concentrations were 1895 ppmv in MW-5, 3150 ppmv in EW-1 and 570 ppmv in EW-2. On October 3, 2005, well EW-2 was closed because the TPHg vapor concentrations had declined to 307 ppmv; at that time, the concentrations in MW-5 and EW-1 were 678 ppmv and 1145 ppmv, respectively.

On October 14, 2005, extraction was resumed from EW-2; on that date, TPHg concentrations were 362 ppmv in MW-5, 252 ppmv in EW-1 and 207 ppmv in EW-2. Extraction ended in EW-2 on October 18, 2005, when the vapor concentration had declined to 190 ppmv. The end concentrations (October 21, 2005) in MW-5 and EW-1 were 200 ppmv and 195 ppmv, respectively. The field data sheets are included in Appendix D.

Water Level Drawdown

Water level measurements were taken on September 28, 2005, and on nearly all subsequent days until the end of the HVDPE event. Only minor decreases in the water level in each well were observed:

DTW in MW-1 went from 22.65 ft bgs to 22.85 ft bgs on October 21, 2005, an increase of 0.20 ft.
DTW in MW-2 went from 21.67 ft bgs to 21.96 ft bgs on October 21, 2005, an increase of 0.29 ft.
DTW in MW-3 went from 18.13 ft bgs to 18.72 ft bgs on October 21, 2005, an increase of 0.59 ft.
DTW in MW-4 went from 20.54 ft bgs to 21.99 ft bgs on October 21, 2005, an increase of 1.45 ft.

EVALUATION OF PRE- AND POST-EXTRACTION GROUNDWATER CONDITIONS

A pre-HVDPE groundwater monitoring event was conducted on July 29, 2005. Following the conclusion of the 33-day HVDPE event on October 21, 2005, a monitoring event was conducted on November 7, 2005. For both events, groundwater samples were collected from monitoring MW-1 through MW-5 and extraction wells EW-1 and EW-2. All of the groundwater samples were analyzed for TPHg and BTEX by Analytical Methods SW8015Cm/8021B; groundwater samples collected from EW-1 and EW-2 were also analyzed for TPHd by Analytical Method SW8015C.

Analytical results for groundwater samples collected from the monitoring and extraction wells are presented in Table 4. Figure 8 summarizes the pre-HVDPE concentrations of FHCs in groundwater; Figure 9 summarizes the post-HVDPE concentrations of FHCs in groundwater.

Comparison of the analytical results from the pre-HVDPE event with those from the post-HVDPE event show that the HVDPE event significantly reduced FHC concentrations in groundwater. In July

2005, concentrations of TPHg were detected in MW-3, MW-5 and EW-1 at 120 µg/l, 66 µg/l and 3500 µg/l, respectively. In November 2005, concentrations of TPHg were only detected in EW-1, at 320 µg/l; a decrease in TPHg concentrations of an order of magnitude from those detected in June 2005.

In July 2005, concentrations of benzene were detected in EW-1 at 26 µg/l. In November 2005, benzene concentrations in EW-1 decreased to non-detect (ND). Benzene concentrations in MW-1 increased from ND in July 2005 to 1.1 µg/l in November 2005. Previous to the July 2005 event, benzene was detected in MW-1 at 0.68 µg/l in February 2003, 8.2 µg/l in October 2004 and 2.1 µg/l in March 2005.

TPHd was detected in EW-1 at 290 µg/l in July 2005 and at 280 µg/l in November 2005; however, for both events the laboratory reported that gasoline-range compounds were significant, making it likely that the diesel-range compounds detected in EW-1 also represent degraded gasoline. Additionally, for the November 2005 event, the TPHd detection in EW-1 was also characterized by the laboratory as "oil range compounds are significant". TPHd is no longer analyzed in MW-1 through MW-5 because TPHd has been ND in MW-1 through MW-4, and the laboratory characterized the MW-5 TPHd results as "gasoline-range compounds were significant", making it likely that the diesel-range compounds detected in MW-5 represent degraded gasoline.

CONCLUSIONS

HVDPE was an effective remediation technology for the site as demonstrated by significant decreases in FHC concentrations in soil vapor samples analyzed during the HVDPE event and significant decreases in FHC concentrations in groundwater samples collected after the HVDPE event. Based on vapor sample analytical results, a total of 845 pounds of FHCs were removed. Additionally, approximately 117,460 gallons of FHC-impacted groundwater were removed.

The initial or startup TPHg vapor concentrations in EW-1 and MW-5 were 4000 ppmv and 6000 ppmv, respectively. The ending or shutdown TPHg vapor concentrations in EW-1 and MW-5 were 440 ppmv and 572 ppmv, respectively. As of November 2005, when compared to the most recent pre-HVDPE analytical results, decreases in TPHg concentrations were measured in wells MW-3 (120 µg/l to ND), MW-5 (66 µg/l to ND) and EW-1 (3500 µg/l to 320 µg/l). Wells MW-1, MW-2, MW-3, MW-4 and EW-2 remained at ND for TPHg. During the same time period, a significant decrease in benzene concentrations was measured in EW-1 (26 µg/l to ND).

RECOMMENDATIONS

EC&A recommends continued quarterly groundwater monitoring for at least one more year to confirm the decrease in FHC concentrations reported in November 2005. Groundwater samples should be collected from all wells and analyzed for TPHg and BTEX by Analytical Methods

SW8015Cm/8021B. Groundwater samples collected from the extraction wells should also be analyzed for TPHd by Method SW8015C for at least one more sampling event.

SCHEDULE

A groundwater sampling event was conducted on March 9, 2006.

LIMITATIONS

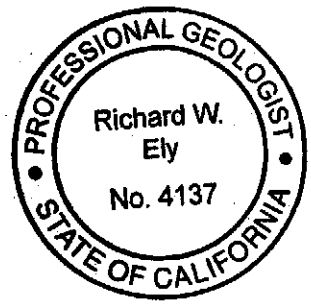
The conclusions presented in this document are professional opinions based on the data presented in this report, including data generated by others. Whereas EC&A does not guarantee the accuracy of information supplied by third parties, we reserve the right to use this information in formulating our professional opinions. They are intended only for the indicated purpose and project site. Conclusions and recommendations presented herein apply to site conditions existing at the time of our study. Changes in the conditions of the site property can occur with time because of natural processes or the works of man on the site or adjacent properties. Changes in applicable standards can also occur as the result of legislation or from the broadening of knowledge. Accordingly, the findings of this documents may be invalidated, wholly or in part, by changes beyond our control.

Thank you for allowing EC&A the opportunity to provide environmental services for you. Please call John Calomiris, project manager, if you have any questions.

Sincerely,

John Calomiris
Project Manger

Richard Ely, PG #4137
Senior Geologist



Attachments: Figure 1 - Site Location Map
Figure 2 - Site Plan
Figure 3 - Cross Sections A-A' and B-B'
Figure 4 - Groundwater Elevation Map, 07 November 2005
Figure 5 - Log of Boring EW-1
Figure 6 - Log of Boring EW-2
Figure 7 - Unified Soil Classification System
Figure 8 - Pre-HVDPE Concentrations of FHCs in Groundwater
Figure 9 - Post-HVDPE Concentrations of FHCs in Groundwater

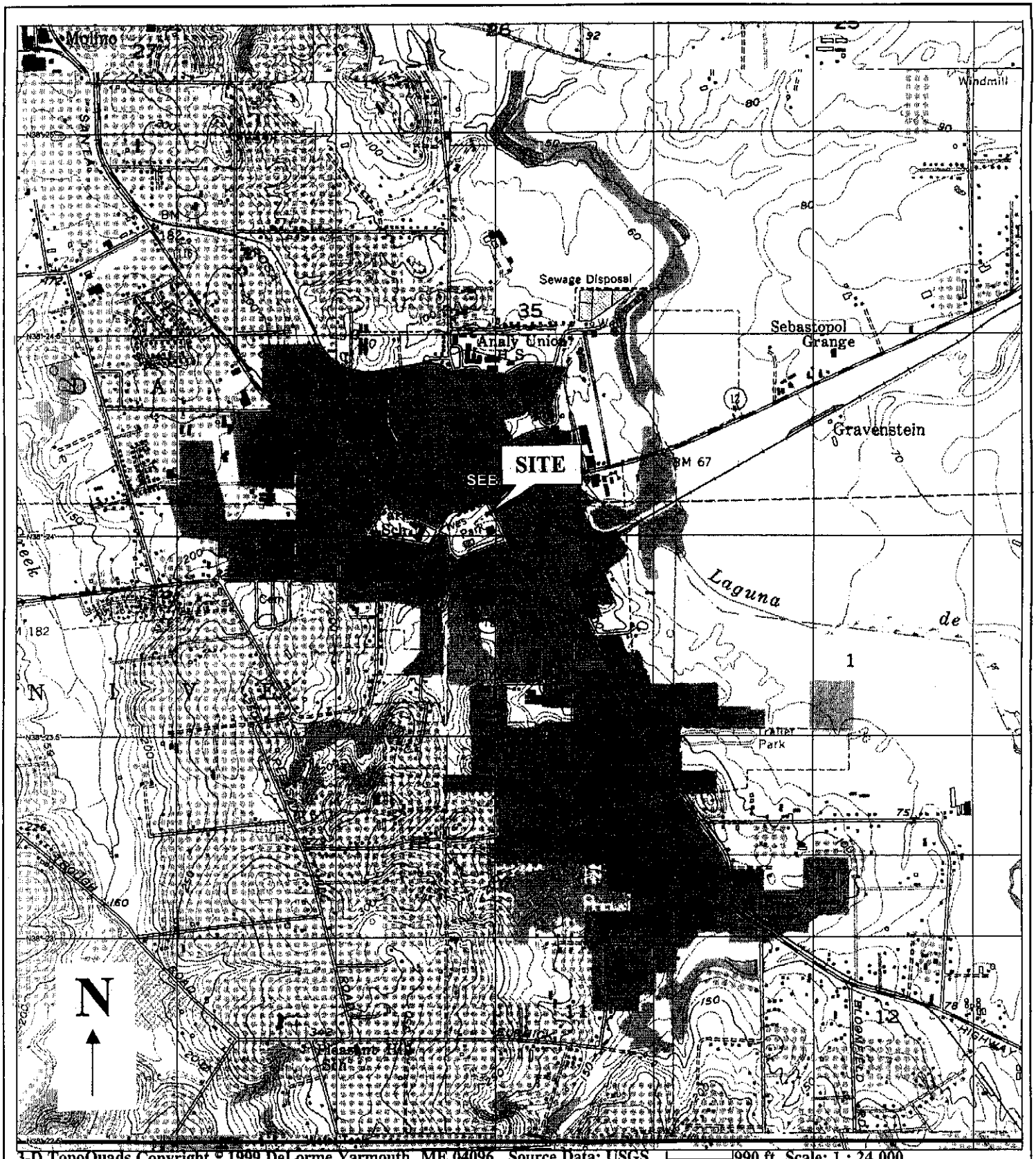
Table 1 - Analytical Results - Soil Samples from UST Removal - July 22, 1999
Table 2 - Analytical Results - Soil Samples from Soil Borings

Table 3 - Analytical Results - Grab-groundwater Samples from Soil Borings
Table 4 - Analytical Results - Groundwater Samples from Monitoring and Extraction Wells
Table 5 - Water Level Data

Appendix A - Permits
Appendix B - Analytical Laboratory Reports
Appendix C - Groundwater Field Logs
Appendix D - CalClean November 2, 2005 HIGH VACUUM DUAL PHASE EXTRACTION REPORT

cc: Beth Lamb, North Coast Regional Water Quality Control Board
Dale Radford, County of Sonoma Department of Health Services

0369\HVDPE Report



EDD CLARK & ASSOCIATES, INC.
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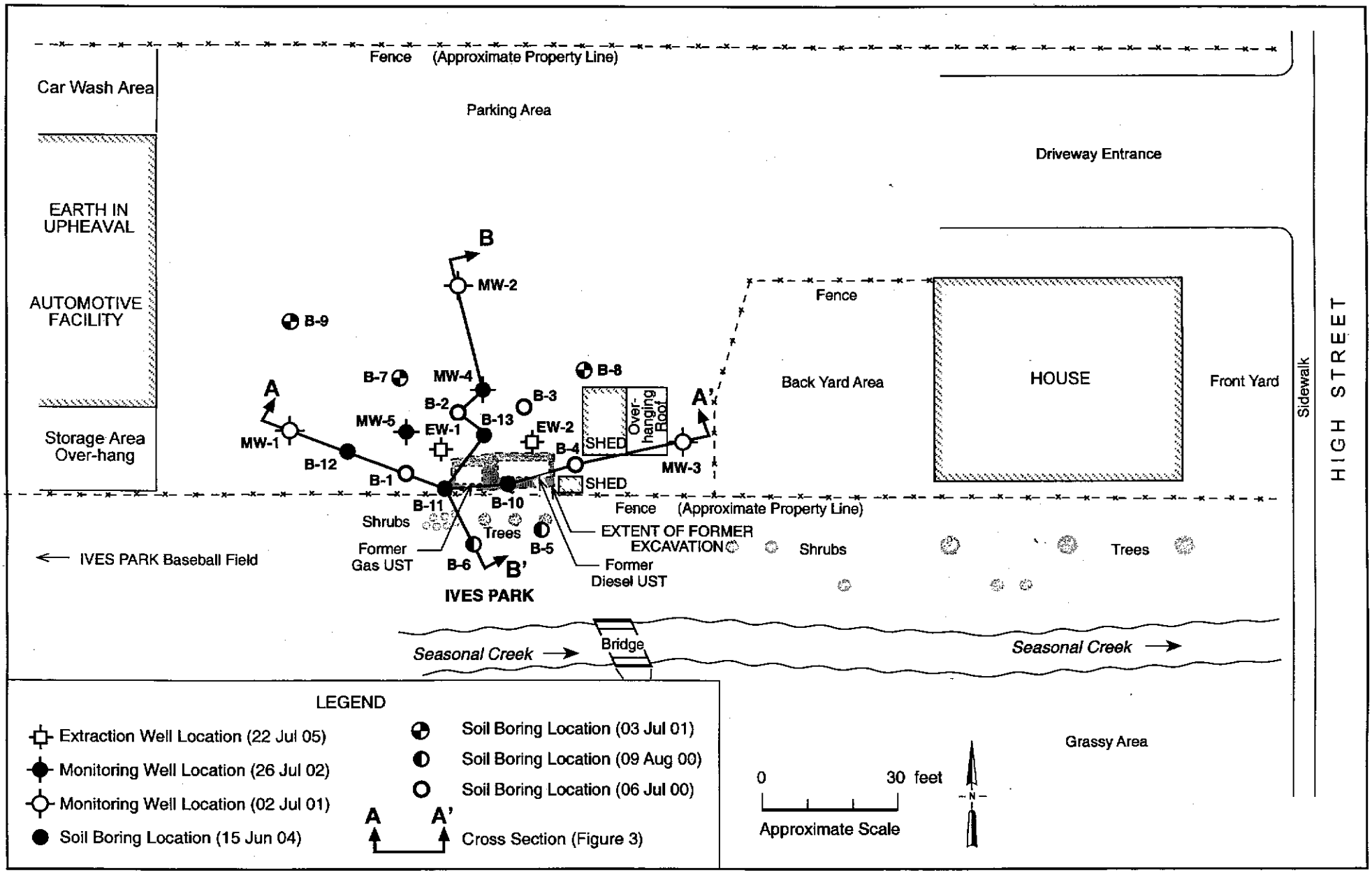
Site Location Map
198 High Street
Sebastopol, California

FIGURE
1

JOB NUMBER	REVIEWED BY:	DATE:	REVISED DATE:
0369,001.99	Lori Brown	February 2003	



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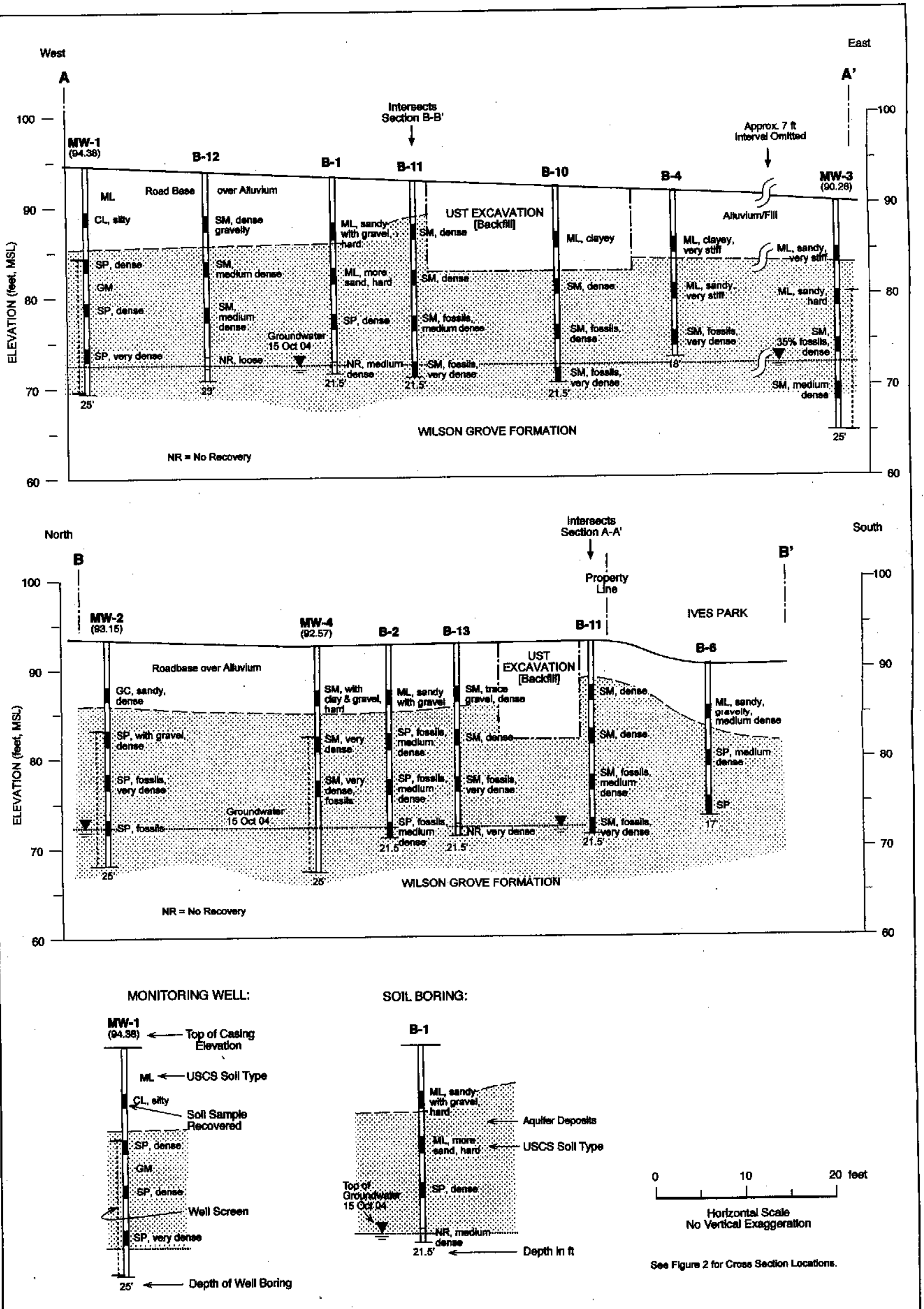
SITE PLAN

198 High Street
Sebastopol, California

FIGURE
2

JOB NUMBER	0369, 001.00	REVIEWED BY	EC&A, Richard Ely	DATE	July, 2001	REVISED DATE	February 2006

(TRACE#416/RG/02Feb06)



SHEET NO. 1 of 1 FIGURE 3

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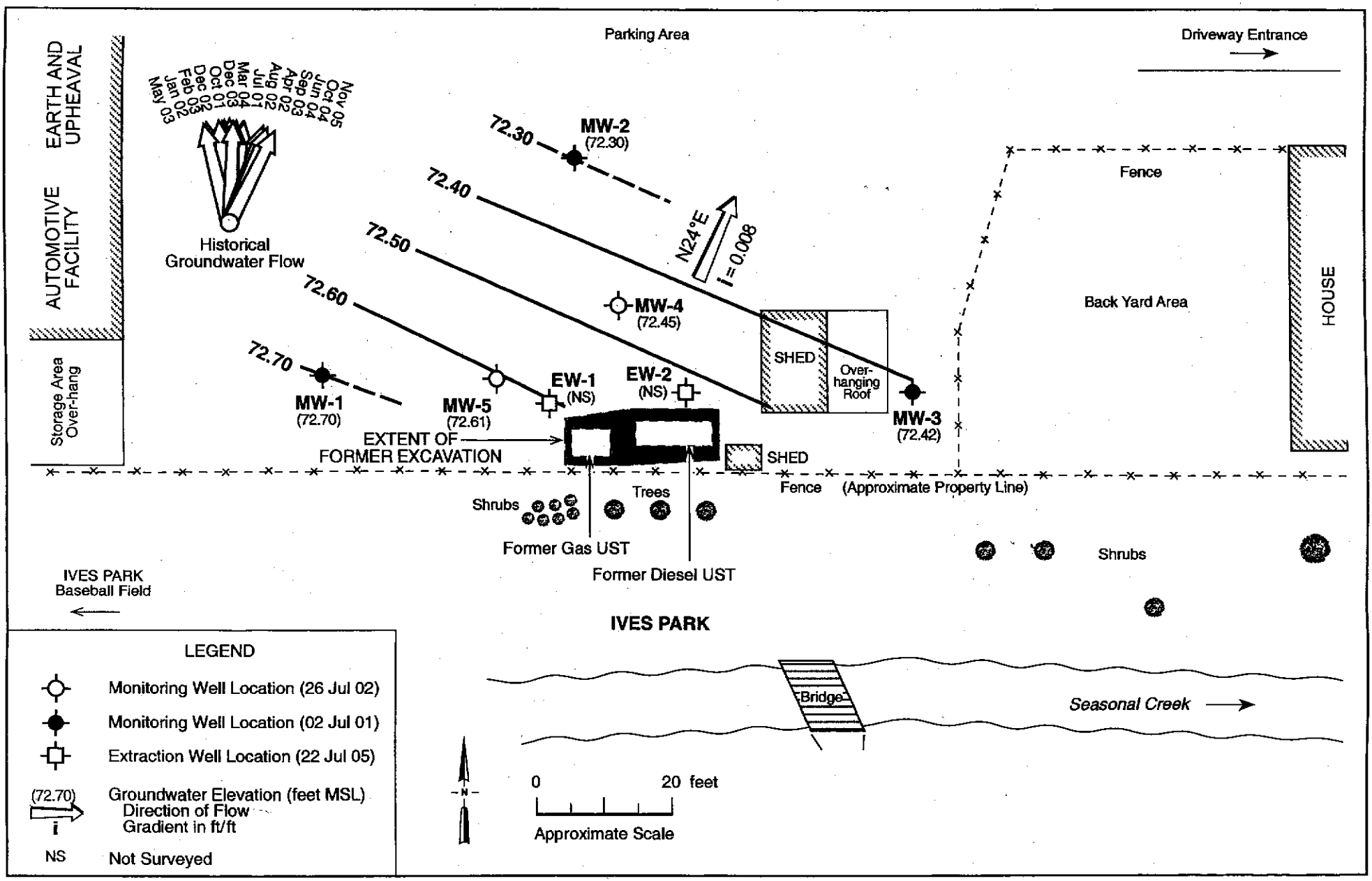
CROSS SECTIONS A-A' AND B-B'
198 High Street
Sebastopol, California

FIGURE 3

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	SHEET NO.
0369, 001.00	EC&A, Richard Ely	March 2005		1 of 1



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GROUNDWATER ELEVATION MAP, 07 November 2005

198 High Street
Sebastopol, California

FIGURE
4

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
0369, 001.00	EC&A, E.J. VandenBosch	July 2001	February 2006

(TRACE#416/RG/02Feb06)

BORING LOCATION	198 High St. (west of shed ~2 ft)	ELEVATION AND DATUM	Ground Surface
		BORING NO.	EW-1
DRILLING AGENCY	Clear Heart Inc.	DRILLER	Pablo
DATE STARTED / DATE FINISHED	22 Jul 05 → 22 Jul 05		
DRILLING EQUIPMENT	Deep Rock DR-10K Truck-mounted Rig	COMPLETION DEPTH	30.0 ft bgs
SAMPLER	CA Modified Split Spoon		
DRILLING METHOD	Hollow Stem Auger	BORING DIA.	10 inches
NO. OF SAMPLES	3 Soil		
SIZE AND TYPE OF CASING	4 inch Schedule 40 PVC	FROM 0.5 ft TO 10.0 ft	WATER LEVEL: FIRST ~19.0 ft bgs
MEASURED / SAMPLED	—		
TYPE OF PERFORATION	0.02 Slotted	FROM 10.0 ft TO 30.0 ft	CORE BARREL: 2.0 inch ϕ
LENGTH	18 inches		
SIZE AND TYPE OF PACK	#2/12 Sand	FROM 8.0 ft TO 30.0 ft	LOGGED BY: JLM
CHECKED BY:	RWE		
TYPE OF SEAL	NO. 1 Bentonite	FROM 5.0 ft TO 8.0 ft	COMMENTS: Soil samples field screened with Photo-Ionization Detector (PID), results in parts per million (ppm). Darcy on-site 1200-1215, 1245-1315 hr.
	NO. 2 Cement Grout	FROM 1.0 ft TO 5.0 ft	

DEPTH (feet)	Samples	Sample ID	Blows	PID (ppm)	MATERIAL DESCRIPTION	USCS	WELL CONSTRUCTION
				0	Approx. 1 ft- 3/4" Gravel and Sand base. [Fill]		Lock Box
					SAND (SW), brown, no odor; sand is fine to coarse, some fine gravels.	SW	Grout
5		d6.5	20	664	CLAYEY SAND (SC) with small Gravel, grayish-green (GLEY 5G 4/2), moist, hydrocarbon (HC) odor.	SC	2" PVC
							Bentonite
						SP	
10		d11.0	32	860	SAND (SP), greenish-gray (GLEY 5BG 5/1),moist, firm, strong HC odor. [Wilson Grove Formation]		
15		d16.0	30	150	SAND (SP), grayish-green (GLEY 5BG 5/1), very moist, medium dense, firm, HC odor; ~85% fine sand, ~15% fines.		Well Screen
							Sand
20			60	4	SAND (SP) with shell fragments, olive brown, wet, no odor.		

(TRACE #416/RG/26Jan06)

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LOG OF EXTRACTION WELL EW-1

198 High Street
Sebastopol, California

FIGURE 5

JOB NUMBER	REVIEWED BY	DATE	REVISED	SHEET NO.
0369, 001.99	EC&A, Jeff Monroe	August 2005	January 2006	1 of 2

BORING LOCATION	198 High St. (west of shed ~2 ft)	CONTINUED LOG, SHEET NO.	2 of 2	FOR BORING NO.	EW-1

DEPTH (feet)	Samples	Sample ID	Blows	PID	MATERIAL DESCRIPTION	USCS	WELL CONSTRUCTION
25			84	0	SAND (SP) with shell fragments, olive brown, saturated, dense; ~70 to 85% sand, ~30 to 15% shell fragments.	SP	Well Screen / Sand
30					TD: 30.0 ft bgs		
35							
40							
45							
50							

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LOG OF EXTRACTION WELL EW-1 (Continued)
198 High Street
Sebastopol, California

FIGURE 5

JOB NUMBER	0369, 001.99	REVIEWED BY	EC&A, Jeff Monroe	DATE	August 2005	REVISED	January 2006	SHEET NO.	2 of 2

(TRACE #4167/RG/26-Jan06)

BORING LOCATION	198 High St. (next to shed ~12 ft west)	ELEVATION AND DATUM	Ground Surface
		BORING NO.	EW-2
DRILLING AGENCY	Clear Heart Inc.	DRILLER	Pablo
DATE STARTED / DATE FINISHED	22 Jul 05 → 22 Jul 05		
DRILLING EQUIPMENT	Deep Rock DR-10K Truck-mounted Rig	COMPLETION DEPTH	30.0 ft bgs
		SAMPLER	CA Modified Split Spoon
DRILLING METHOD	Hollow Stem Auger	BORING DIA.	10 inches
		NO. OF SAMPLES	4 Soil
SIZE AND TYPE OF CASING	4 inch Schedule 40 PVC	FROM 0.5 ft TO 10.0 ft	WATER LEVEL FIRST ~20.0 ft bgs
		MEASURED / SAMPLED	—
TYPE OF PERFORATION	0.02 Slotted	FROM 10.0 ft TO 30.0 ft	CORE BARREL 2.0 inch ϕ
		LENGTH	18 inches
SIZE AND TYPE OF PACK	#2/12 Sand	FROM 9.0 ft TO 30.0 ft	LOGGED BY: JLM
		CHECKED BY:	RWE
TYPE OF SEAL NO. 1	Bentonite	FROM 6.0 ft TO 9.0 ft	COMMENTS: Soil samples field screened with Photo-Ionization Detector (PID), results in parts per million (ppm).
TYPE OF SEAL NO. 2	Cement Grout	FROM 1.0 ft TO 6.0 ft	

DEPTH (feet)	Samples	Sample ID	Blows	PID (ppm)	MATERIAL DESCRIPTION	USCS
					Approx. 1 ft Gravel baserock. [Fill]	
				0	SILTY SAND (SM), dark reddish brown, moist; ~80% fine to coarse sand, ~20% silt.	SM
5		d6.0	31	0	CLAYEY SANDY SILT (ML), rust mottling, stiff to medium dense; ~40% silt, ~30% fine sand, ~30% clay, trace small gravel.	ML
10		d11.0	22	0	SAND (SP), yellow (10YR 7/6), moist, loose to medium dense, no odor; fine-grained sand. [Wilson Grove Formation]	SP
15		d16.0	46	0	SAND (SP) with shell fragments, olive brown (2.5Y 5/6), moist, medium dense.	
20		d21.0	62	0	▼ Same as above, except wet, shells are beige colored to off white; no odors.	

WELL CONSTRUCTION: Lock Box; Grout; 4" PVC; Bentonite; Well Screen; Sand

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LOG OF EXTRACTION WELL EW-2

198 High Street
Sebastopol, California

FIGURE 6

JOB NUMBER	REVIEWED BY	DATE	REVISED	SHEET NO.
0369, 001.99	EC&A, Jeff Monroe	August 2005		1 of 2

(TRACE #416/RG/26Jan06)

BORING LOCATION	198 High St. (next to shed ~12 ft west)	CONTINUED LOG, SHEET NO.	2 of 2	FOR BORING NO.	EW-2

DEPTH (feet)	Samples	Sample ID	Blows	PID	MATERIAL DESCRIPTION	USCS	WELL CONSTRUCTION
25			90 (11")		Same as above, except saturated.	SP	Well Screen / Sand
30					TD: 30.0 ft bgs		
35							
40							
45							
50							

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LOG OF EXTRACTION WELL EW-2 (Continued)
198 High Street
Sebastopol, California

FIGURE 6

JOB NUMBER	0369, 001.99	REVIEWED BY	EC&A, Jeff Monroe	DATE	August 2005	REVISED	January 2006	SHEET NO.	2 of 2

(TRACE #416/RG/26Jan06)

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS				TYPICAL NAMES
COARSE-GRAINED SOILS (MORE THAN HALF IS COARSER THAN NO. 200 SIEVE)	GRAVELS (MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE)	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
			GP	POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 15% FINES	GM	SILTY GRAVELS, SILTY GRAVELS WITH SAND
			GC	CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SANDS (MORE THAN HALF COARSE FRACTION IS LESS THAN NO. 4 SIEVE SIZE)	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
			SP	POORLY GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 15% FINES	SM	SILTY SANDS WITH OR WITHOUT GRAVEL
			SC	CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS (MORE THAN HALF IS FINER THAN NO. 200 SIEVE)	SILTS AND CLAYS (LIQUID LIMIT 50% OR LESS)		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
			OL	ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50%)		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACIOUS, FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC SILTS OR CLAYS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS			PT	PEAT AND OTHER HIGHLY ORGANIC SOILS

- No Soil Sample Attempted
- Sample Observed but Not Retained
- No Recovery in Sampler
- d10.5' — Sample Submitted for Laboratory Analysis -- ID for Retained Sample = Depth (ft bgs)
- 21 — Blows/Foot: Blows Required to Drive Sampler One Foot Using Hammer Weight of 140 Pounds Falling 30 Inches

(2.5YR 6/2) (GLEY-1 N4) — Soil Color according to Munsell Soil Color Charts (2000 Edition)

- First Encountered Saturated Soil
- Measured Ground Water Level
- Estimated Boundary Between Lithologic Units
- Estimated Gradational Boundary Between Lithologic Units

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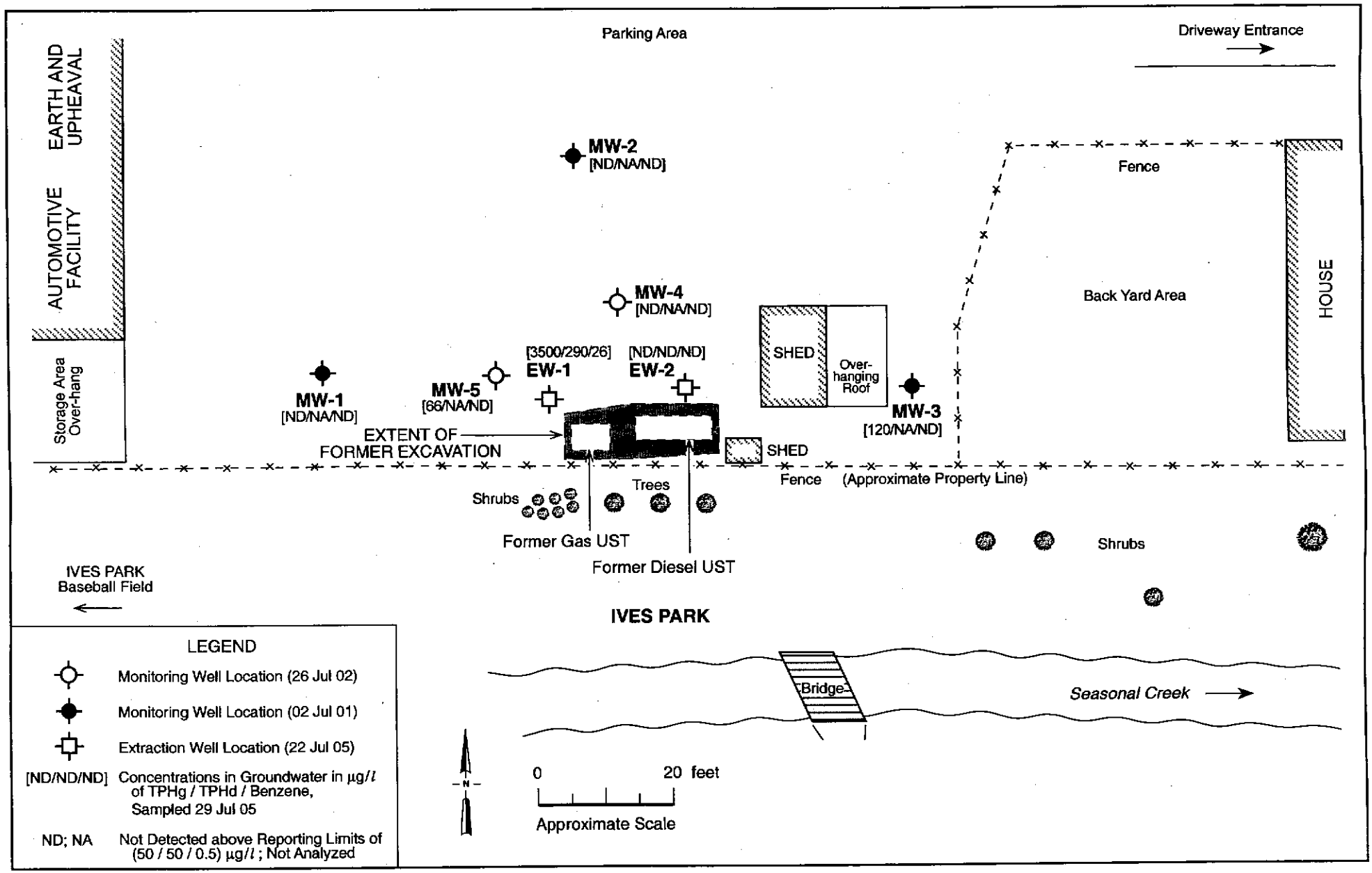
USCS LOG SYMBOLS
198 High Street
Sebastopol, California

FIGURE 7

JOB NUMBER	REVIEWED BY	DATE	REVISED
0369, 001.99	EC&A, Richard Ely	February 2006	

(TRACE #416/RG/09Feb06)



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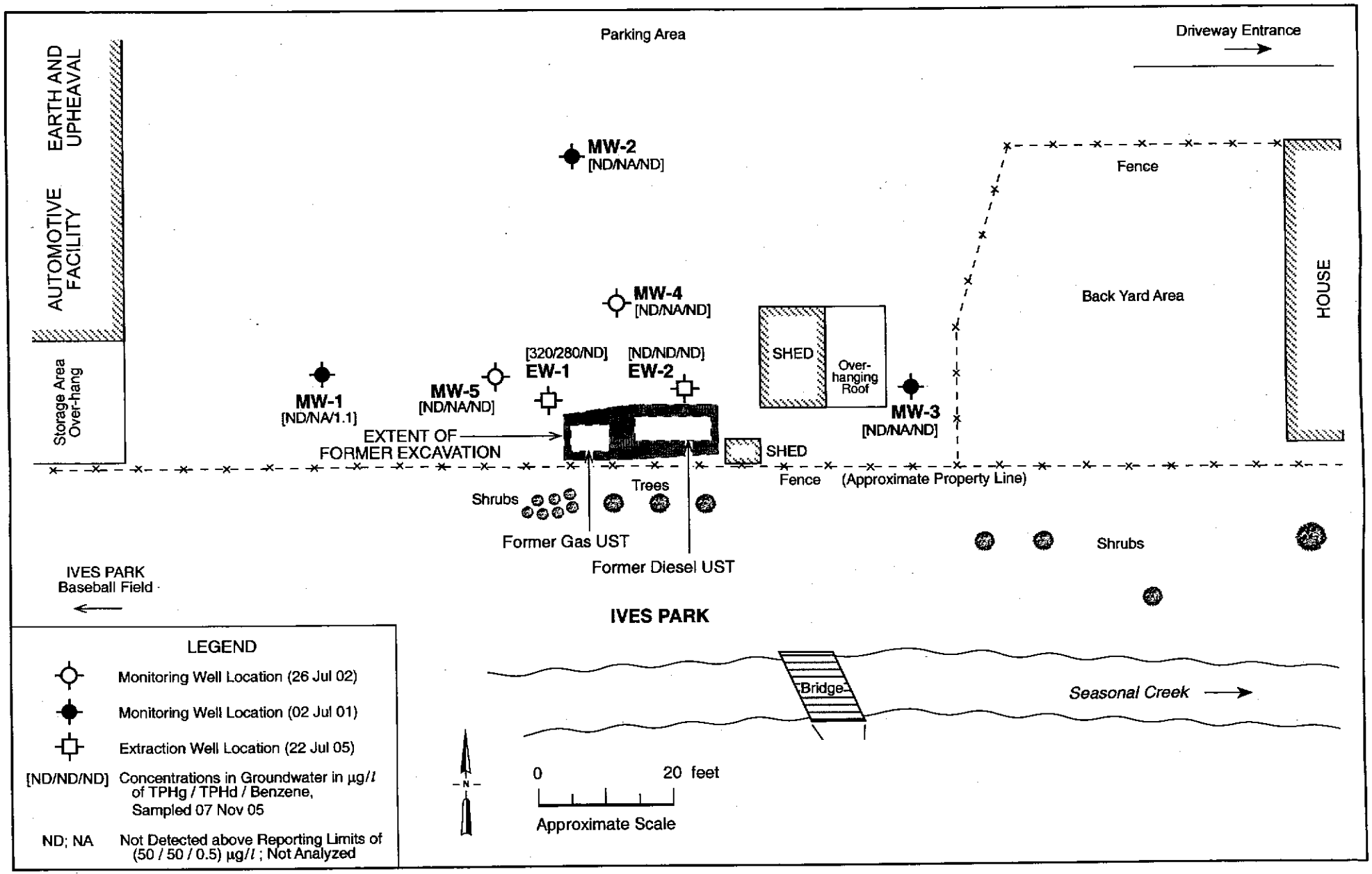
PRE-HVDPE CONCENTRATIONS OF FHCs in Groundwater, Sampled 29 July 2005

198 High Street
Sebastopol, California

FIGURE
8

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
0369, 001.00	EC&A, E.J. VandenBosch	July 2001	February 2006

(TRACE#416/RG/09Feb06)



(TRACE#416/RG/09Feb06)

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POST-HVDPE CONCENTRATIONS OF FHCs in Groundwater, Sampled 07 November 2005

198 High Street
Sebastopol, California

FIGURE
9

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
0369, 001.00	EC&A, E.J. VandenBosch	July 2001	February 2006

Table 1. Analytical Results - Soil Samples from UST Removal - July 22, 1999
198 High Street, Sebastopol, California

Sample ID	TPHg mg/kg	TPHd mg/kg	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylenes mg/kg	Total Lead mg/kg
WED-1	ND<1.0	ND<1.0	ND<0.05*	ND<0.005	ND<0.005	ND<0.005	ND<0.005	NA
EEG-1	170 [a]	NA	ND**	0.44	6.9	2.5	12	5.0
OS-1	300 [b]	46 [d,B,g]	ND<2*	ND<0.10	ND<0.10	ND<0.10	13	NA
SP-1-4	6.2 [b]	30 [d,g]	ND<0.05*	ND<0.005	0.16	0.14	0.65	3.5

Notes:

TPHg:	Total petroleum hydrocarbons as gasoline
TPHd:	Total petroleum hydrocarbons as diesel
MTBE:	Methyl tert-butyl ether
mg/kg:	Milligrams per kilogram
ND:	Not detected above the respective reporting limit
NA:	Not analyzed
WED:	West end diesel tank
EEG	East end gasoline tank
OS:	UST overburden soil stockpile sample
SP:	Composite sample from sand used to fill the USTs
a:	Unmodified or weakly modified gasoline is significant
b:	Heavier gasoline range compounds are significant (aged gasoline?)
B:	Diesel range compounds are significant; no recognizable pattern
d:	Gasoline range compounds are significant
g:	Oil range compounds are significant
*:	Sample analyzed for MTBE by EPA Method 8020
**:	Sample analyzed for MTBE and other gasoline oxygenates by EPA Method 8260

Table 2. Analytical Results - Soil Samples from Soil Borings
198 High Street, Sebastopol, California

Sample ID	Sample Depth ft bgs	Sample Date	TPHg mg/kg	TPHd mg/kg	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylenes mg/kg
B-1-10.5	10.5	07/06/00	4.6 [a]	1.0 [D]	ND<0.02	0.12	0.28	0.18	0.51
B-1-15.5	15.5	07/06/00	8.5 [a]	2.1 [D]	ND<0.02	0.20	0.31	0.35	1.1
B-2-10.5	10.5	07/06/00	970 [j]	190 [D]	ND<1.0	ND<0.20	ND<0.20	5.6	8.4
B-2-15.5	15.5	07/06/00	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-3-10.5	10.5	07/06/00	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-3-15.5	15.5	07/06/00	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-4-10.5	10.5	07/06/00	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-4-16.0	16.0	07/06/00	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-5-10.5	10.5	08/09/00	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-5-15.5	15.5	08/09/00	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-6-10.5	10.5	08/09/00	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-6-15.5	15.5	08/09/00	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-7-11.0	11.0	07/03/01	1.1 [b]	6.4 [e]	ND<0.05	ND<0.005	ND<0.005	0.005	0.009
B-7-16.0	16.0	07/03/01	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-8-11.0	11.0	07/03/01	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-8-16	16.0	07/03/01	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-9-11.0	11.0	07/03/01	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B-9-16.0	16.0	07/03/01	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005

Table 2. Analytical Results - Soil Samples from Soil Borings
198 High Street, Sebastopol, California

Sample ID	Sample Depth ft bgs	Sample Date	TPHg mg/kg	TPHd mg/kg	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylenes mg/kg
B-10d6.0	6.0	06/15/04	ND<1.1 [n]	5.5 [g, B]	ND<0.054	ND<0.0054	ND<0.0054	ND<0.0054	ND<0.0054
B-10d11.0	11.0	06/15/04	ND<1.1 [n]	ND<1.0	ND<0.055	ND<0.0055	ND<0.0055	ND<0.0055	ND<0.0055
B-10d16.0	16.0	06/15/04	ND<1.1 [n]	ND<1.0	ND<0.056	ND<0.0056	ND<0.0056	ND<0.0056	ND<0.0056
B-10d21.5	21.5	06/15/04	ND<1.1 [n]	ND<1.0	ND<0.056	ND<0.0056	ND<0.0056	ND<0.0056	ND<0.0056
B-11d5.5	5.5	06/15/04	ND<1.0 [n]	5.8 [k]	ND<0.052	ND<0.0052	ND<0.0052	ND<0.0052	ND<0.0052
B-11d11.0	11.0	06/15/04	50 [b]	380 [D, B]	ND<0.28	ND<0.028	0.35	0.53	2.1
B-11d16.0	16.0	06/15/04	ND<1.1 [n]	3.3 [D]	ND<0.057	ND<0.0057	0.011	0.0086	0.036
B-11d21.0	21.0	06/15/04	ND<1.0 [n]	ND<1.0	ND<0.052	ND<0.0052	ND<0.0052	ND<0.0052	ND<0.0052
B-12d6.0	6.0	06/15/04	ND<0.98 [n]	ND<1.0	ND<0.049	ND<0.0049	ND<0.0049	ND<0.0049	ND<0.0049
B-12d11.5	11.5	06/15/04	42 [b]	700 [D]	ND<1.9	ND<0.19	0.67	0.29	4.3
B-12d16.0	16.0	06/15/04	ND<1.3 [n]	ND<1.0	ND<0.063	ND<0.0063	ND<0.0063	ND<0.0063	ND<0.0063
B-13d6.0	6.0	06/15/04	ND<0.87 [n]	ND<1.0	ND<0.043	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043
B-13d11.0	11.0	06/15/04	ND<1.1 [n]	ND<1.0	ND<0.057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057
B-13d16.0	16/0	06/15/04	ND<1.2 [n]	ND<1.0	ND<0.059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059
MW-1	11.0	07/02/01	ND<1.0	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005
MW-1	16.0	07/02/01	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW-2	11.0	07/02/01	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW-2	16.0	07/02/01	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW-3	6.0	07/02/01	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW-3	11.0	07/02/01	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005

Table 2. Analytical Results - Soil Samples from Soil Borings
198 High Street, Sebastopol, California

Sample ID	Sample Depth ft bgs	Sample Date	TPHg mg/kg	TPHd mg/kg	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylenes mg/kg
MW-4-11	11.0	07/26/02	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW-4-15.5	15.5	07/26/02	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW-5-6.5	6.5	07/26/02	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW-5-11.0	11.0	07/26/02	1.9 [a]	2300 [d,D]	ND<0.05	0.026	0.057	0.045	0.10
MW-5-16.0	16.0	07/26/02	ND<1.0	ND<1.0	ND<0.05	ND<0.005	ND<0.005	0.0076	0.013
EW1-d6.5	**6.5**	**07/22/05**	**7400 [G, m]**	**570 [D, B]**	**ND<5.0**	**7.8**	**160**	**86**	**470**
EW1-d11.0	**11.0**	**07/22/05**	**16 [G, m]**	**110 [D, B]**	**ND<0.058**	**ND<0.0058**	**0.040**	**0.065**	**0.40**
EW1-d16.0	**16.0**	**07/22/05**	**3.6 [a]**	**4.3 [g]**	**ND<0.10**	**ND<0.010**	**0.061**	**0.045**	**0.22**
EW2-d6.0	**6.0**	**07/22/05**	**NA**	**ND<1.0**	**NA**	**NA**	**NA**	**NA**	**NA**
EW2-d11.0	**11.0**	**07/22/05**	**NA**	**ND<1.0**	**NA**	**NA**	**NA**	**NA**	**NA**
EW2-d16.0	**16.0**	**07/22/05**	**ND<1.2 [n]**	**ND<1.0**	**ND<0.062**	**ND<0.0062**	**ND<0.0062**	**ND<0.0062**	**ND<0.0062**

TPHg: Total petroleum hydrocarbons as gasoline
TPHd: Total petroleum hydrocarbons as diesel
MTBE: Methyl tert-butyl ether; analyzed by EPA Method 8020
ft bgs: Feet below ground surface
mg/kg: Milligrams per kilogram
ND: Not detected above the respective reporting limit
NA: Not analyzed
a: Unmodified or weakly modified gasoline is significant
b: Heavier gasoline range compounds are significant (aged gasoline?)
B: Diesel range compounds are significant; no recognizable pattern
D: Gasoline range compounds are significant
e: Medium boiling point pattern that does not match diesel (kerosene?)
g: Oil range compounds are significant
G: Strongly aged gasoline or diesel range compounds are significant
j: No recognizable pattern
k: Kerosene/kerosene range
m No recognizable pattern
n: Reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight

Table 3. Analytical Results - Grab-groundwater Samples from Soil Borings
198 High Street, Sebastopol, California

Sample ID	Sample Date	TPHg µg/l	TPHd µg/l	Benzene µg/l	Toluene µg/l	Ethyl-benzene µg/l	Xylenes µg/l	MTBE µg/l	Other Oxygenates µg/l	EDB µg/l	1,2-DCA µg/l
B-1-GW	07/06/00	31,000 [a]	3300 [d]	910	3600	1300	4700	ND<13	ND	17	21
B-2-GW	07/06/00	5600 [a]	1500 [d]	220	27	150	530	ND<1.0	ND	3.1	29
B-3-GW	07/06/00	170 [a,i]	180 [d/b,i]	1.3	1.0	1.3	0.58	ND<5.0 *	ND	NA	NA
B-4-GW	07/06/00	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	16	NA	NA	NA
B-5-GW	08/09/00	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND	ND	ND
B-6-GW	08/09/00	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0 *	NA	NA	NA
B-7-18.0	07/03/01	260 [a]	160 [d]	ND<0.5	ND<0.5	3.1	4.1	ND<1.0	ND	ND	ND
B-8-17.0	07/03/01	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND	ND	ND
B-9-20.0	07/03/01	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND	ND	ND
B-10-W	06/15/04	ND<50 [i]	ND<50 [i]	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	ND<0.5	ND<0.5
B-11-W	06/15/04	12,000 [a,i]	3700 [d,i]	92	1500	540	2300	ND<5.0	ND **	ND<5.0	ND<5.0
B-12-W	06/15/04	160 [a,i]	59 [d,i]	2.3	3.6	4.9	20	ND<0.5	ND	ND<0.5	ND<0.5
B-13-W	06/15/04	ND<50 [i]	56 [b,i]	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	ND<0.5	ND<0.5

TPHg: Total petroleum hydrocarbons as gasoline
TPHd: Total petroleum hydrocarbons as diesel
MTBE: Methyl tert-butyl ether; analyzed by Analytical Method SW8260B unless noted otherwise
EDB: Ethylene dibromide
1,2-DCA: 1,2-dichloroethane
µg/l: Micrograms per liter

ND: Not detected above the respective reporting limit
NA: Not analyzed
a: Unmodified or weakly modified gasoline is significant
b: Diesel range compounds are significant; no recognizable pattern
d: Gasoline range compounds are significant
i: Liquid sample that contains greater than ~1 or ~5 vol. % sediment
*: Sample analyzed for MTBE by EPA Method 8020
**: Reporting limits ranged from ND<5.0 to ND<5000 µg/l, respectively

Table 4. Analytical Results - Groundwater Samples from Monitoring and Extraction Wells
198 High Street, Sebastopol, California

Well ID	Sample Date	DTW feet	TPHg µg/l	TPHd µg/l	Benzene µg/l	Toluene µg/l	Ethyl-benzene µg/l	Xylenes µg/l	MTBE µg/l	Other Oxygenates µg/l	EDB µg/l	1,2-DCA µg/l
MW-1	07/12/01	18.92	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND	ND	ND
	10/08/01	20.12	ND<50	ND<50	ND<0.5	0.70	0.68	2.1	ND<1.0	ND	ND	ND
	01/08/02	19.49	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND	ND	ND
	04/03/02	19.00	ND<50	ND<50	ND<0.5	0.53	ND<0.5	1.4	ND<0.5	ND	ND	ND
	08/14/02	20.43	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	ND<0.5	ND<0.5
	11/06/02	21.81	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	ND<0.5	ND<0.5
	02/14/03	21.49	ND<50	NA	0.68	ND<0.5	ND<0.5	0.85	ND<0.5	ND	ND<0.5	ND<0.5
	09/15/03	21.79	ND<50	NA	ND<0.5	ND<0.5	1.8	2.8	NA	NA	NA	NA
	03/10/04	20.13	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	10/15/04	21.78	300 [a]	NA	8.2	49	11	48	NA	NA	NA	NA
	03/04/05	21.60	130 [a]	NA	2.1	13	3.1	12	NA	NA	NA	NA
	07/29/05	21.54	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	11/07/05	21.68	ND<50	NA	1.1	0.88	0.91	1.9	NA	NA	NA	NA
MW-2 [†]	07/12/01	17.88	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND	ND	2.1
	10/08/01	19.08	ND<50	ND<50	ND<0.5	ND<0.5	0.62	1.1	ND<1.0	ND	ND	ND
	01/08/02	18.52	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND	ND	ND
	04/03/02	18.10	ND<50	ND<50	ND<0.5	0.63	0.58	1.6	ND<0.5	ND	ND	ND
	08/14/02	19.43	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	ND<0.5	ND<0.5
	11/06/02	20.77	ND<50	ND<50	ND<0.5	0.69	ND<0.5	1.4	ND<0.5	ND	ND<0.5	ND<0.5
	02/14/03	20.47	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	ND<0.5	ND<0.5

Table 4. Analytical Results - Groundwater Samples from Monitoring and Extraction Wells
198 High Street, Sebastopol, California

Well ID	Sample Date	DTW feet	TPHg µg/l	TPHd µg/l	Benzene µg/l	Toluene µg/l	Ethyl-benzene µg/l	Xylenes µg/l	MTBE µg/l	Other Oxygenates µg/l	EDB µg/l	1,2-DCA µg/l
MW-2 † continued	09/15/03	20.81	ND<50	NA	ND<0.5	ND<0.5	0.97	1.7	NA	NA	NA	NA
	03/10/04	19.22	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	10/15/04	20.85	51 [a]	NA	ND<0.5	1.7	0.55	2.5	NA	NA	NA	NA
	07/29/05	20.69	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	11/07/05	20.85	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
MW-3 †	07/12/01	14.78	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND	ND	ND
	10/08/01	15.96	ND<50	ND<50	ND<0.5	0.70	0.68	2.1	ND<1.0	ND	ND	ND
	01/08/02	15.13	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND	ND	ND
	04/03/02	14.97	ND<50	ND<50	ND<0.5	0.54	ND<0.5	1.3	ND<0.5	ND	ND	ND
	08/14/02	16.31	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	ND<0.5	ND<0.5
	11/06/02	20.77	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	ND<0.5	ND<0.5
	02/14/03	17.29	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	ND<0.5	ND<0.5
	09/15/03	17.74	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	03/10/04	16.02	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	10/15/04	17.84	ND<50	NA	ND<0.5	3.4	0.96	4.2	NA	NA	NA	NA
	07/29/05	17.66	120 [b]	NA	ND<0.5	9.3	3.3	13	NA	NA	NA	NA
	11/07/05	17.84	ND<50 [i]	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
MW-4 †	08/14/02	18.71	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	ND<0.5	ND<0.5
	11/06/02	20.05	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	ND<0.5	ND<0.5
	02/14/03	19.72	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	ND<0.5	ND<0.5

Table 4. Analytical Results - Groundwater Samples from Monitoring and Extraction Wells
198 High Street, Sebastopol, California

Well ID	Sample Date	DTW feet	TPHg µg/l	TPHd µg/l	Benzene µg/l	Toluene µg/l	Ethyl-benzene µg/l	Xylenes µg/l	MTBE µg/l	Other Oxygenates µg/l	EDB µg/l	1,2-DCA µg/l
MW-4 † continued	05/21/03	20.19	82 [a]	ND<50	3.6	3.1	2.5	5.8	ND<0.5	ND	ND<0.5	ND<0.5
	09/15/03	20.10	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	0.73	NA	NA	NA	NA
	12/15/03	19.82	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	03/10/04	18.44	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	06/29/04	18.52	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	10/15/04	20.14	ND<50	NA	ND<0.5	3.5	1.1	4.7	NA	NA	NA	NA
	07/29/05	19.98	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	11/07/05	20.12	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	1.2	NA	NA	NA	NA
MW-5	08/14/02	19.07	1100 [a]	140 [d]	13	12	3.6	50	ND<0.5	ND	ND<0.5	ND<0.5
	11/06/02	20.41	470 [a]	71 [d]	9.9	7.1	2.2	30	ND<0.5	ND	ND<0.5	ND<0.5
	02/14/03	20.08	350 [a]	NA	9.6	7.6	11	24	ND<0.5	ND	ND<0.5	ND<0.5
	05/21/03	20.57	360 [a]	ND<50	9.7	3.1	12	18	ND<0.5	ND	ND<0.5	ND<0.5
	09/15/03	20.43	540 [a]	81 [d]	12	2.6	21	32	NA	NA	NA	NA
	12/15/03	20.14	72 [a]	ND<50	0.93	ND<0.5	ND<0.5	2.8	NA	NA	NA	NA
	03/10/04	18.75	200 [a]	83 [d]	4.7	1.2	7.8	12	NA	NA	NA	NA
	06/29/04	18.82	210 [a]	ND<50	3.1	0.61	6.5	6.3	NA	NA	NA	NA
	10/15/04	20.44	170 [a]	ND<50	3.9	21	5.6	22	NA	NA	NA	NA
	03/04/05	22.80	120 [a]	NA	2.3	ND<0.5	3.8	6.0	NA	NA	NA	NA
	07/29/05	20.21	66 [b]	NA	ND<0.5	8.2	2.8	12	NA	NA	NA	NA
	11/07/05	20.37	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA

Table 4. Analytical Results - Groundwater Samples from Monitoring and Extraction Wells
198 High Street, Sebastopol, California

Well ID	Sample Date	DTW feet	TPHg µg/l	TPHd µg/l	Benzene µg/l	Toluene µg/l	Ethyl-benzene µg/l	Xylenes µg/l	MTBE µg/l	Other Oxygenates µg/l	EDB µg/l	1,2-DCA µg/l
EW-1	07/29/05	19.51	3500 [a]	290 [d]	26	300	75	370	NA	NA	NA	NA
	11/07/05	19.64	320 [b]	280 [d,f,g]	ND<0.5	3.8	1.2	53	NA	NA	NA	NA
EW-2	07/29/05	19.48	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA
	11/07/05	19.61	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA	NA	NA

TPHg: Total petroleum hydrocarbons as gasoline
TPHd: Total petroleum hydrocarbons as diesel
MTBE: Methyl tert-butyl ether; analyzed by Analytical Method SW8260B unless noted otherwise
EDB: 1,2-dibromoethane
1,2-DCA: 1,2-dichloroethane
µg/l: Micrograms per liter
ND: Not detected above the reporting limit
NA: Not analyzed
NS: Not sampled
†: MW-2, MW-3 and MW-4 are sampled semi-annually at seasonally low and high water-table levels
a: Unmodified or weakly modified gasoline is significant
b: Heavier gasoline range compounds are significant (aged gasoline?)
d: Gasoline range compounds are significant
f: One to a few isolated peaks present
g: Oil range compounds are significant
i: Liquid sample that contains greater than ~1 vol. % sediment

Table 5. Water Level Data
198 High Street, Sebastopol, California

Sample ID	Date	TOC Elevation feet	DTW feet	Groundwater Elevation feet
MW-1	07/12/01	94.38	18.92	75.46
MW-2		93.15	17.88	75.27
MW-3		90.26	14.78	75.48
Gradient: Due North; 0.006 ft/ft				
MW-1	10/08/01	94.38	20.12	74.26
MW-2		93.15	19.08	74.07
MW-3		90.26	15.96	74.30
Gradient = N03°W; 0.006 ft/ft				
MW-1	01/08/02	94.38	19.49	74.89
MW-2		93.15	18.52	74.63
MW-3		90.26	15.13	75.13
Gradient = N13°W; 0.011 ft/ft				
MW-1	04/03/02	94.38	19.00	75.38
MW-2		93.15	18.10	75.05
MW-3		90.26	14.97	75.29
Gradient = N08°E; 0.0087 ft/ft				
MW-1	08/14/02	94.38	20.43	73.95
MW-2		93.15	19.43	73.72
MW-3		90.26	16.31	73.95
MW-4		92.57	18.71	73.86
MW-5		92.98	19.07	73.91
Gradient = N04°E; 0.036 ft/ft				
MW-1	11/06/02	94.38	21.81	72.57
MW-2		93.15	20.77	72.38
MW-3 *		90.26	20.77	69.49
MW-4		92.57	20.05	72.52
MW-5		92.98	20.41	72.57
Gradient not calculated*				

Table 5. Water Level Data
198 High Street, Sebastopol, California

Sample ID	Date	TOC Elevation feet	DTW feet	Groundwater Elevation feet
MW-1	12/03/02	94.38	22.06	72.32
MW-2		93.15	21.04	72.11
MW-3		90.26	17.89	72.37
MW-4		92.57	20.30	72.27
MW-5		92.98	20.67	72.31
Gradient = N05°W, 0.0067 ft/ft				
MW-1	02/14/03	94.38	21.49	72.89
MW-2		93.15	20.47	72.68
MW-3		90.26	17.29	72.97
MW-4		92.57	19.72	72.85
MW-5		92.98	20.08	72.90
Gradient = N06°W, 0.0071 ft/ft				
MW-1	05/21/03	94.38	22.00	72.38
MW-2		93.15	20.94	72.21
MW-3		90.26	17.72	72.54
MW-4		92.57	20.19	72.38
MW-5		92.98	20.57	72.41
Gradient = N13°W, 0.0074 ft/ft				
MW-1	09/15/03	94.38	21.79	72.59
MW-2		93.15	20.81	72.34
MW-3		90.26	17.74	72.52
MW-4		92.57	20.10	72.47
MW-5		92.98	20.43	72.55
Gradient = N09°E, 0.0061 ft/ft				

Table 5. Water Level Data
198 High Street, Sebastopol, California

Sample ID	Date	TOC Elevation feet	DTW feet	Groundwater Elevation feet
MW-1	12/15/03	94.38	21.51	72.87
MW-2		93.15	20.59	72.56
MW-3		90.26	17.44	72.82
MW-4		92.57	19.82	72.75
MW-5		92.98	20.14	72.84
Gradient = N05°E, 0.008 ft/ft				
MW-1	03/10/04	94.38	20.13	74.25
MW-2		93.15	19.22	73.93
MW-3		90.26	16.02	74.24
MW-4		92.57	18.44	74.13
MW-5		92.98	18.75	74.23
Gradient = N04°E, 0.009 ft/ft				
MW-1	06/29/04	94.38	20.13	74.25
MW-2		93.15	19.23	73.92
MW-3		90.26	16.23	74.03
MW-4		92.57	18.52	74.05
MW-5		92.98	18.82	74.16
Gradient = N20°E, 0.008 ft/ft				
MW-1	10/15/04	94.38	21.78	72.60
MW-2		93.15	20.85	72.30
MW-3		90.26	17.84	72.42
MW-4		92.57	20.14	72.43
MW-5		92.98	20.44	72.54
Gradient = N19°E, 0.007ft/ft				

Table 5. Water Level Data
198 High Street, Sebastopol, California

Sample ID	Date	TOC Elevation feet	DTW feet	Groundwater Elevation feet
MW-1	03/04/05	94.38	21.60	72.78
MW-2		93.15	20.79	72.36
MW-3		90.26	17.52	72.74
MW-4		92.57	19.98	72.59
MW-5		92.98	22.80	70.18
Gradient = N03°E; 0.012 ft/ft				
MW-1	07/29/05	94.38	21.54	72.84
MW-2		93.15	20.69	72.46
MW-3		90.26	17.66	72.60
MW-4		92.57	19.98	72.59
MW-5		92.98	20.21	72.77
EW-1		NS	19.51	---
EW-2		NS	19.48	---
Gradient = N21°E; 0.009 ft/ft				
MW-1	11/07/05	94.38	21.68	72.70
MW-2		93.15	20.85	72.30
MW-3		90.26	17.84	72.42
MW-4		92.57	20.12	72.45
MW-5		92.98	20.37	72.61
EW-1		NS	19.64	---
EW-2		NS	19.61	---
Gradient = N24°E; 0.008 ft/ft				

TOC: Top of casing elevation measured relative to mean sea level (msl)
DTW: Depth to water from TOC
NS: Not surveyed
*: Due to anomalous data for MW-3, November 6, 2002 DTW measurements were not used to calculate the groundwater-flow direction and gradient. Measurements were taken again on December 3, 2002 and used for gradient evaluation.

Appendix A

Permits

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH DIVISION
475 Aviation Blvd., Suite 220, Santa Rosa, CA 95403
Phone (707) 565-6565 Fax (707) 565-6525 www.sonomacounty.org

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BY

For Office Use Only
Amount paid 294.00
Receipt number 1150
Payment date 6-24-05 Rev. code PAB
Site ID# 11015
Permit # 4742 HMW

APPLICATION FOR DRILLING PERMIT
for Regional Board Lead/Environmental Assessment / LOP Lead

Well type: [ ] Monitoring well [X] Recovery extraction well [ ] Boring [ ] Injection well [ ] Destruct [ ] Environmental assessment
[ ] Soil gas survey [ ] Direct push [ ] Air sparging/venting [ ] Remediation well [ ] Other

Well depth 25 ft. Boring depth "

On-site well/boring 2 ID # EW-1 & EW-2 # Off-site well/boring ID

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 198 High Street, Sebastopol, CA AP#

Facility Name Earth In Upheaval

On-site Owner Richard Phone (707)523-3777

Street 198 High St. City Sebastopol State CA Zip 95472

Responsible Party Gayle Veale Phone (530) 842-2790

Street 416 S. Oregon St. City Yreka State CA Zip 96097

Consultant Edd Clark & Associates Phone (707) 792-9500

Street P.O. Box 3039 City Rohnert Park State CA Zip 94927

License #/Type 660915

Drilling Contractor Clear Heart Drilling, Inc. Phone 707-568-6095

Street 483 W College Ave. City Santa Rosa State CA Zip 95401

C-57 License # 780357

Type of work: [X] Initial investigation ____ # Wells [ ] Subsequent investigation ____ # Wells [ ] Destruct ____ # Wells

Groundwater investigation due to: [X] Underground tank [ ] Surface impoundment [ ] Environmental assessment
[ ] Surface disposal practice—specify involved industry
[ ] Other

Perforated intervals N/A Chemical constituents TPHg, TPHd, BTEX, MTBE

Disposal method for soil cuttings 55-gallon drums - pending analytical results Disposal method for development water 55-gallon drums - pending analytical

Drilling method Hollow Stem Auger Method of drill equip. rinsate containment drums - "

If destroying a well, abandonment method N/A

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? [ ] Yes [X] No
50 feet of any sanitary sewer line? [ ] Yes [X] No
25 feet of any private sanitary sewer line? [X] Yes [ ] No

06/24/05

001343T
WELL PER 294.00
TTLAMT 294.00
CHECKS 294.00
CHANGE 0.00
1.15B #2 14:20

In addition, all monitoring wells must include ***identification system*** affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

For Office Use Only

Address 198 High St. Sebastopol

Site ID# 1015

Permit # 4742 HMW

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 565-6565, 48 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Health Services and the owner a legible copy of the State Water Well Driller's Report within 15 days; and a copy of the Summary Report, including sample results, should be received by this Department within 90 days in order to obtain final approval on this well permit. I acknowledge that the application will become a permit ***only*** after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance.

Lindsay Wakefield Date 6/23/05

Signature of Well Driller—***no proxies***

Insurance Carrier State Fund Expiration Date 1-1-06

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

Revised FS/CAP approved by Darcy Berning verbally on 6/22/05. Letter of approval en route.

See Attachment 3

FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH DIVISION

Permit approved by _____ Date ___/___/___

Constr. approved by _____ Observed? [ ] Yes [ ] No Well # _____ Date ___/___/___

RWQCB / LOP approval _____ Date ___/___/___

COUNTY OF SONOMA DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH DIVISION

3273 Airway Drive, Suite D ❖ Santa Rosa, CA 95403
(707) 565-6565 ❖ FAX (707) 565-6525 ❖ www.sonoma-county.org

ATTACHMENT 3

Exemption for Proposed Monitoring Well

The proposed location(s) for installation of monitoring wells at the subject site are not in conformance with setback requirements in the water well ordinance for Sonoma County. These setback requirements were implemented to protect groundwater from possible known sources of contamination.

An exemption will be granted for well(s) EW-1 & EW-2

at this subject site: 198 High Street, Sebastopol, California

if the following conditions are met:

1. Monitoring wells will be constructed to standards that prevent the contamination of groundwater from a sewage disposal system.
2. Monitoring wells not in conformance with minimum setback requirements shall be sampled every six (6) months for nitrate. The samples will be used as indicators of possible sewage contamination from nearby sewage lines.

I agree to comply with the above requirements for the proposed well(s):

John Coleman — Signature of Responsible Party or Agent
EDD Clark & Associates Inc. — Company

Technical Operations Manager — Title
07-11-05 — Date

For office use only

Exemption approved: [signature] Date: 7-11-05

August 25, 2005

CITY OF
SANTA ROSA

UTILITIES DEPARTMENT
SUBREGIONAL WATER RECLAMATION SYSTEM
4300 Llano Road
Santa Rosa, CA 95407
707-543-3350
Fax: 707-543-3399
www.ci.santa-rosa.ca.us

John Calomiris
Edd Clark & Associates
P.O Box 3039
Rohnert Park, CA 95492

AUTHORIZATION TO DISCHARGE - PERMIT 05-027

Reference is made to your request for authorization of a one-time discharge of treated groundwater at 198 High Street, Sebastopol to the City of Santa Rosa Subregional Reclamation Facility. The treated groundwater will be generated from a dual-phase extraction test operated by Cal-Clean, Inc. The pilot test is expected to be operated up to 30 days with a discharge flow of around 2,000 gallons per day.

The treated groundwater will be acceptable for discharge to the sanitary sewer under the following conditions:

1. This office shall be notified 24 hours in advance of the discharge so that an Industrial Waste Inspector will be on site during the treatment start-up.

2. The discharge shall be metered in order to determine the volume fee of $7.20 per thousand gallons.

3. The discharge shall be sampled upon start-up and at every 30,000 gallon discharge interval for TPH as gasoline, TPH as diesel, and EPA 8260 B with fuel oxygenates to confirm compliance with local limits. Note the test results shall be submitted to this office with-in 5 days of each sampling event.

Your cooperation in this matter is greatly appreciated. Should you have questions or comments please call Chris Murray at 707-543-3393.

Sincerely,

LYNN M. SMALL
Deputy Director Environmental Services

LMS\lh

City of Sebastopol

Planning Department
714 Johnson Street
Sebastopol, CA 95472
707-823-5331 (Phone)
707-823-4721 (Fax)
www.ci.sebastopol.ca.us
email: kplan@sonic.net

September 19, 2005

Gail Veale
416 South Oregon Street
Yreka, CA 96097

This letter hereby authorizes the experimental and temporary operation of High Vacuum Dual Phase Extraction equipment at the Earth in Upheaval business located at 198 High Street for a trial period of 10 days, commencing on September 19, 2005.

The City is in receipt of your Temporary Use Permit (TUP) application requesting approval to operate High Vacuum Dual Phase Extraction (HVDPE) equipment at the Earth in Upheaval Auto Repair business located at 198 High Street. The City anticipates acting on the Temporary Use Permit at the end of this week, however in light of the fact that the project is required for cleanup of groundwater contamination, and the initial application is for a short-term use, there is public interest in facilitating commencement of the operation and therefore the City will allow a 10-day experimental period of operation, which will also provide information relevant to the TUP determination.

The project proposal includes justification as to why the remediation is necessary, a project description, and specifications about the equipment that will be used. The purpose of the HVDPE event is to remediate fuel hydrocarbon impacted soil and groundwater at the subject site. In their letter, dated July 11, 2005, the County of Sonoma Department of Health Services concurred with Edd Clarke and Associates Inc.'s recommendation of HVDPE as the most feasible remedial alternative for the site, at which time they approved a 30- day test of the system. EC & A has been retained by the property owner, Gayle Veale, as the environmental consultants for this project.

The remediation equipment is slated to operate around the clock for a minimum of 14 days and a maximum of 45 days; a 30 day HVDPE event is anticipated. The project site is zoned RM-H, High Density Multi-family and occupied by Earth in Upheaval Auto Repair. It is surrounded by residences to the east, City property to the south and private businesses to the north. The HVDPE equipment will be mounted on a graveled area at the southern end of the subject property.

High-vacuum dual phase extraction is a technology that uses a vacuum system to remove various combinations of contaminated groundwater. Screened extraction wells are installed at 20-foot intervals within the source area. The well system lowers the water table, whereby extracted liquids and vapor are treated and collected for disposal. Up to 300 gallons per day of extracted water may be reused in the

HVDPE system, and the remaining water is treated on-site. The treated water is pumped into the municipal sewer system. The applicant anticipates a rate of up to approximately one gallon per minute of treated water to be released into the municipal sewer system.

The application indicates that CalClean HVDPE trucks are equipped with a sound barrier that reduces the noise level of the equipment to 65 decibels at the unit and 55 decibels ten feet away from the unit. After reviewing your application, the Planning Department has found that the establishment, maintenance or operation of the proposed use will not, under the circumstances of the particular case, be detrimental to the health, safety, peace, comfort or general welfare of persons residing or working in the neighborhood of such proposed use or development, or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the City in that the extraction system is temporary, is necessary to mitigate environmental pollution, and the equipment will be soundproofed to reduce noise emissions.

The initial operation is subject to the following conditions:

1. The applicant shall provide a 24 hour, 7 days a week contact point telephone number in case of an emergency, equipment failure, noise issues etc.

2. Operation of the equipment shall not increase ambient noise levels in the adjacent residential area to more than fifty-five (55) dBA, as a maximum, with the intent to achieve less than 55 dBA at the property lines of adjacent parcels. In addition, the equipment shall not emit any type of noise that has the potential of being particularly offensive to surrounding properties, such as a high-pitched whine.

3. The applicant shall establish a billing account with the Sebastopol Finance Department, for sewer discharges to the City's Sanitary System.

4. Metered discharges from the treatment system shall be reported at the end of the 30-day test event, to the City Engineering Department and Finance Department. Discharges shall be paid at the normal volume of discharge billing rate for non-commercial use.

5. The applicant shall provide written notice to the City indicating the dates of start-up and completion of the testing period.

If the pilot test of the system is unsuccessful in removing the contamination at the site, the applicant shall submit a revised work plan proposal to the City of Sebastopol. Such a plan would be subject to the acquisition of, in advance of equipment operation, all appropriate permits from the City and other applicable agencies. The operation of the system described in the application for longer than 30 days, but not more than 180 days, may be approved by the Planning Director without requiring a new Temporary Use Permit, subject to the approved conditions.

Similar conditions are anticipated for any TUP approval, but may be modified based on this test authorization.

Please feel free to call me if you have any questions.

Sincerely,

Kenyon Webster
Planning Director

Cc: Rich Emig, Superintendent of Public Works
Glenn Schainblatt, Building Official
Sue Kelly, Engineering Director
Edd Clarke & Associates, P.O. Box 3039, Rohnert Park, CA 94927
Dave Brennan, City Manager
Mary Gourley, Planning Tech.

OCT 0 1 2005

COPY

City of Sebastopol

Planning Department
714 Johnson Street
Sebastopol, CA 95472
707-823-5331 (Phone)
707-823-4721 (Fax)
www.ci.sebastopol.ca.us
email: kplan@sonic.net

September 29, 2005

Gail Veale
416 South Oregon Street
Yreka, CA 96097

The Planning Department is in receipt of your Temporary Use Permit (TUP) application requesting approval to operate High Vacuum Dual Phase Extraction (HVDPE) equipment at the Earth in Upheaval Auto Repair business located at 198 High Street. In accordance with Municipal Code § 17.280.0930.E. the Planning Director may authorize temporary uses for one term of up to six months and may approve one extension of up to six months.

The project proposal includes justification as to why the remediation is necessary, a project description, and specifications about the equipment that will be used. The purpose of the HVDPE event is to remediate fuel hydrocarbon impacted soil and groundwater at the subject site. In their letter, dated July 11, 2005, the County of Sonoma Department of Health Services concurred with Edd Clarke and Associates Inc.'s recommendation of HVDPE as the most feasible remedial alternative for the site, at which time they approved a 30- day test of the system. EC & A has been retained by the property owner, Gayle Veale, as the environmental consultants for this project.

The remediation equipment is slated to operate around the clock for a minimum of 14 days and a maximum of 45 days; a 30 day HVDPE event is anticipated. The project site is zoned RM-H, High Density Multi-family and occupied by Earth in Upheaval Auto Repair. It is surrounded by residences to the east, City property to the south and private businesses to the north. The HVDPE equipment will be mounted on a graveled area at the southern end of the subject property.

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The application indicates that CalClean HVDPE trucks are equipped with a sound barrier that reduces the noise level of the equipment to 65 decibels at the unit and 55 decibels ten feet away from the unit.

After reviewing your application, the Planning Department has found that the establishment, maintenance or operation of the proposed use will not, under the circumstances of the particular case, be detrimental to the health, safety, peace, comfort or general welfare of persons residing or working in the neighborhood of such proposed use or development, or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the City in that the extraction system is temporary, is necessary to mitigate environmental pollution, and the equipment will be soundproofed to reduce noise emissions.

The approval is subject to the following conditions:

1. The applicant shall provide a 24 hour, 7 days a week contact point telephone number in case of an emergency, equipment failure, noise issues etc.

2. Operation of the equipment shall not increase ambient noise levels in the adjacent residential area to more than fifty-five (55) dBA, as a maximum, with the intent to achieve less than 55 dBA at the property lines of adjacent parcels. In addition, the equipment shall not emit any type of noise that has the potential of being particularly offensive to surrounding properties, such as a high-pitched whine.

3. The applicant shall establish a billing account with the Sebastopol Finance Department, for sewer discharges to the City's Sanitary System.

4. Metered discharges from the treatment system shall be reported at the end of the 30-day test event, to the City Engineering Department and Finance Department. Discharges shall be paid at the normal volume of discharge billing rate for non-commercial use.

5. The applicant shall provide written notice to the City indicating the dates of start-up and completion of the testing period.

If the one-month pilot test of the system is unsuccessful in removing the contamination at the site, the applicant shall submit a revised work plan proposal to the City of Sebastopol. Such a plan would be subject to the acquisition of, in advance of equipment operation, all appropriate permits from the City and other applicable agencies. The operation of the system described in the application for longer than 30 days, but not more than 180 days, may be approved by the Planning Director without requiring a new Temporary Use Permit, subject to the approved conditions.

If you are dissatisfied with the decision of the Sebastopol Planning Department, you have a right to appeal this decision to the Planning Commission within five (5) working days of the decision. This is Thursday, September 29, 2005 at 5:00 PM. This must be in the form of a letter and a $150.00 processing fee delivered to the Planning Department, 714 Johnson Street.

Please feel free to call me if you have any questions.

Sincerely,

Kenyon Webster
Planning Director

Cc: Rich Emig, Superintendent of Public Works
Glenn Schainblatt, Building Official
Sue Kelly, Engineering Director
Edd Clarke & Associates, P.O. Box 3039, Rohnert Park, CA 94927
Dave Brennan, City Manager
Mary Gourley, Planning Tech.

Appendix B

Analytical Laboratory Reports

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

Edd Clark & Associates, Inc. 320 Professional Center Ste. 215 Rohnert Park, CA 94928	Client Project ID: #0369; 198 High St. S.	Date Sampled: 07/22/05
		Date Received: 07/22/05
	Client Contact: Jeff Monroe	Date Reported: 07/28/05
	Client P.O.:	Date Completed: 07/28/05

WorkOrder: 0507388

July 28, 2005

Dear Jeff:

Enclosed are:

1). the results of **7** analyzed samples from your **#0369; 198 High St. S. project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

Edd Clark & Associates, Inc.	Client Project ID: #0369; 198 High St. S.	Date Sampled: 07/22/05
320 Professional Center Ste. 215		Date Received: 07/22/05
Rohnert Park, CA 94928	Client Contact: Jeff Monroe	Date Extracted: 07/22/05
	Client P.O.:	Date Analyzed: 07/24/05-07/25/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE [Encore Sampling]*

Extraction method: SW5035 Analytical methods: SW8021B/8015Cm Work Order: 0507388

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
003A	EW2-d16.0	S	ND<1.2,n	ND<0.062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	1	103
005A	EW1-d6.5	S	7400,g,m	ND<5.0	7.8	160	86	470	100	93.4
006A	EW1-d11.0	S	16,g,m	ND<0.058	ND<0.0058	0.040	0.065	0.40	1	116
007A	EW1-d16.0	S	3.6,a	ND<0.10	ND<0.010	0.061	0.045	0.22	2	93.0

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
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Edd Clark & Associates, Inc.	Client Project ID: #0369; 198 High St. S.	Date Sampled: 07/22/05
320 Professional Center Ste. 215		Date Received: 07/22/05
Rohnert Park, CA 94928	Client Contact: Jeff Monroe	Date Extracted: 07/22/05
	Client P.O.:	Date Analyzed: 07/24/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0507388

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
008A	SP-1 (Stockpile)	S	ND	ND	ND	ND	ND	ND	1	98.0
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
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Edd Clark & Associates, Inc.	Client Project ID: #0369; 198 High St. S.	Date Sampled: 07/22/05
320 Professional Center Ste. 215		Date Received: 07/22/05
Rohnert Park, CA 94928	Client Contact: Jeff Monroe	Date Extracted: 07/22/05
	Client P.O.:	Date Analyzed: 07/22/05-07/26/05

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0507388

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0507388-001A	EW2-d6.0	S	ND	1	98
0507388-002A	EW2-d11.0	S	ND	1	99
0507388-003B	EW2-d16.0	S	ND	1	99
0507388-005B	EW1-d6.5	S	570,d,b	5	103
0507388-006B	EW1-d11.0	S	110,d,b	1	100
0507388-007B	EW1-d16.0	S	4.3,d	1	101
0507388-008A	SP-1 (Stockpile)	S	4.0,g	1	101

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil | QC Matrix: Soil | WorkOrder: 0507388

EPA Method: SW8021B/8015Cm | **Extraction: SW5030B** | **BatchID: 17281** | **Spiked Sample ID: 0507381-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex)£	ND	0.60	90.6	90	0.596	95.2	94	1.24	70 - 130	70 - 130
MTBE	ND	0.10	101	95.3	6.26	88.3	83.3	5.87	70 - 130	70 - 130
Benzene	ND	0.10	85.8	82.8	3.53	90.5	88.1	2.70	70 - 130	70 - 130
Toluene	ND	0.10	89.9	87.4	2.82	94.2	91.4	3.03	70 - 130	70 - 130
Ethylbenzene	ND	0.10	97.5	94.6	3.01	101	98.2	2.71	70 - 130	70 - 130
Xylenes	ND	0.30	100	95.7	4.43	103	100	3.28	70 - 130	70 - 130
%SS:	87	0.10	102	99	3.09	100	98	1.62	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17281 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507388-008A	7/22/05 1:45 PM	7/22/05	7/24/05 1:38 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil | QC Matrix: Soil | WorkOrder: 0507388

EPA Method: SW8021B/8015Cm | **Extraction: SW5035** | **BatchID: 17286** | **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex)£	N/A	0.60	N/A	N/A	N/A	94	92.6	1.49	N/A	70 - 130
MTBE	N/A	0.10	N/A	N/A	N/A	94.4	99.1	4.87	N/A	70 - 130
Benzene	N/A	0.10	N/A	N/A	N/A	86.8	84.9	2.25	N/A	70 - 130
Toluene	N/A	0.10	N/A	N/A	N/A	90.4	88.1	2.61	N/A	70 - 130
Ethylbenzene	N/A	0.10	N/A	N/A	N/A	97.5	94.6	3.03	N/A	70 - 130
Xylenes	N/A	0.30	N/A	N/A	N/A	100	96	4.08	N/A	70 - 130
%SS:	N/A	0.10	N/A	N/A	N/A	95	93	2.45	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17286 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507388-003A	7/22/05 10:25 AM	7/22/05	7/24/05 3:51 AM	0507388-005A	7/22/05 12:35 PM	7/22/05	7/24/05 4:55 AM
0507388-006A	7/22/05 12:45 PM	7/22/05	7/25/05 3:05 PM	0507388-007A	7/22/05 12:55 PM	7/22/05	7/25/05 3:56 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

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Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0507388

EPA Method: SW8015C	Extraction: SW3550C				BatchID: 17279			Spiked Sample ID: 0507381-002A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	ND	20	98.3	100	1.89	100	101	1.11	70 - 130	70 - 130
%SS:	103	50	102	102	0	105	107	2.06	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17279 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507388-001A	7/22/05 9:50 AM	7/22/05	7/22/05 11:41 PM	0507388-002A	7/22/05 10:05 AM	7/22/05	7/23/05 12:53 AM
0507388-003B	7/22/05 10:25 AM	7/22/05	7/23/05 2:04 AM	0507388-005B	7/22/05 12:35 PM	7/22/05	7/26/05 2:37 AM
0507388-006B	7/22/05 12:45 PM	7/22/05	7/23/05 4:25 AM	0507388-007B	7/22/05 12:55 PM	7/22/05	7/23/05 5:35 AM
0507388-008A	7/22/05 1:45 PM	7/22/05	7/23/05 6:44 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

ECAR 0507388

Edd Clark & Associates, Inc.
Environmental Consultants

Chain of Custody Report

P.O. Box 3039, Rohnert Park, CA 94927
Tel: (707) 792-9500 (800) 474-1448 Fax: (707) 792-9504

E-mail in EDF for Upload to Geotracker: Yes ☐ No ☐ Initials _____

Samplers Signature: Jeff Monroe

EC&A job # 0369

Global I.D. #

Facility Name & Location: 198 High St. S. Sebastopol

Field Point Name	Date	Time	Sample ID (depth)	Sample Type	Media	# of Items	Analysis: TPH-g TPH-d 8015	Analysis: BTEX/MTBE 8021	Analysis: TPH-d only 8015	Remarks
1. EW2	7/22/05	9:50	EW2-d6.0	Discrete	Soil	1/2			X	← hold
2. EW-2		10:05	EW2-d11.0			1			X	← hold
3. EW-2		10:25	EW2-d16.0			1/2	X	X		
4. EW-2		10:35	EW2-d21.0			1			X	← hold
5. EW-1		12:35	EW1-d6.5	Discrete	Soil	1/2	X	X		Extra Tedlar Core's
6. EW-1		12:45	EW1-d11.0			1/2	X	X		with 48 hrs
7. EW-1		12:55	EW1-d16.0			1/2	X	X		
~~8. EW-1~~			~~EW1-~~							
9. SP-1	7/22/05	13:45	SP1 (Stockpile)	Grab	Soil	1	X	X		

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
	7/22/05	5:30			7/22/05	7:55	
Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0507388 **ClientID: ECAR** **EDF: NO**

Report to:
Jeff Monroe
Edd Clark & Associates, Inc.
320 Professional Center Ste. 215
Rohnert Park, CA 94928
TEL: (707) 792-9500
FAX: (707) 792-9504
ProjectNo: #0369; 198 High St. S.
PO:

Bill to:
Accounts Payable
Edd Clark & Associates, Inc.
320 Professional Center Ste.215
Rohnert Park, CA 94928

Requested TAT: 5 days
Date Received: 07/22/2005
Date Printed: 07/22/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0507388-001	EW2-d6.0	Soil	07/22/2005	☐			A												
0507388-002	EW2-d11.0	Soil	07/22/2005	☐			A												
0507388-003	EW2-d16.0	Soil	07/22/2005	☐	A		B												
0507388-005	EW1-d6.5	Soil	07/22/2005	☐	A		B												
0507388-006	EW1-d11.0	Soil	07/22/2005	☐	A		B												
0507388-007	EW1-d16.0	Soil	07/22/2005	☐	A		B												
0507388-008	SP-1 (Stockpile)	Soil	07/22/2005	☐		A	A												

Test Legend:

1	G-MBTEX_ENCORE	2	G-MBTEX_S	3	TPH(D)_S	4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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Edd Clark & Associates, Inc. 320 Professional Center Ste. 215 Rohnert Park, CA 94928	Client Project ID: #0369; Earth in Upheavel 198 High St	Date Sampled: 07/29/05
		Date Received: 08/01/05
	Client Contact: Ronen Johnson	Date Reported: 08/04/05
	Client P.O.:	Date Completed: 08/04/05

WorkOrder: 0508005

August 04, 2005

Dear Ronen:

Enclosed are:

1). the results of 7 analyzed samples from your **#0369; Earth in Upheavel 198 High St project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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Edd Clark & Associates, Inc. 320 Professional Center Ste. 215 Rohnert Park, CA 94928	Client Project ID: #0369; Earth in Upheavel 198 High St	Date Sampled: 07/29/05
		Date Received: 08/01/05
	Client Contact: Ronen Johnson	Date Extracted: 08/02/05-08/03/05
	Client P.O.:	Date Analyzed: 08/02/05-08/03/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0508005

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND	---	ND	ND	ND	ND	1	109
002A	MW-2	W	ND	---	ND	ND	ND	ND	1	111
003A	MW-3	W	120,b	---	ND	9.3	3.3	13	1	109
004A	MW-4	W	ND	---	ND	ND	ND	ND	1	111
005A	MW-5	W	66,b	---	ND	8.2	2.8	12	1	108
006A	EW-1	W	3500,a	---	26	300	75	370	1	103
007A	EW-2	W	ND	---	ND	ND	ND	ND	1	114

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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Website: www.mccampbell.com E-mail: main@mccampbell.com

Edd Clark & Associates, Inc. 320 Professional Center Ste. 215 Rohnert Park, CA 94928	Client Project ID: #0369; Earth in Upheavel 198 High St	Date Sampled: 07/29/05
		Date Received: 08/01/05
	Client Contact: Ronen Johnson	Date Extracted: 08/01/05
	Client P.O.:	Date Analyzed: 08/01/05-08/02/05

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0508005

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0508005-006B	EW-1	W	290,d	1	97
0508005-007B	EW-2	W	ND	1	100

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water | QC Matrix: Water | WorkOrder: 0508005

EPA Method: SW8021B/8015Cm | **Extraction: SW5030B** | **BatchID: 17395** | **Spiked Sample ID: 0508005-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex)£	ND	60	92.2	93.4	1.32	100	101	1.18	70 - 130	70 - 130
MTBE	ND	10	86.1	87.6	1.65	81.7	92.6	12.5	70 - 130	70 - 130
Benzene	ND	10	85.3	83.9	1.58	94.1	93.5	0.631	70 - 130	70 - 130
Toluene	ND	10	92.5	91.4	1.20	92.9	92.4	0.584	70 - 130	70 - 130
Ethylbenzene	ND	10	99.4	98.4	0.981	106	105	1.36	70 - 130	70 - 130
Xylenes	ND	30	100	100	0	107	103	3.17	70 - 130	70 - 130
%SS:	109	10	99	97	2.01	104	99	4.09	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17395 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0508005-001A	7/29/05 1:20 PM	8/02/05	8/02/05 8:46 PM	0508005-002A	7/29/05 1:00 PM	8/02/05	8/02/05 9:16 PM
0508005-003A	7/29/05 12:40 PM	8/02/05	8/02/05 11:15 PM	0508005-004A	7/29/05 12:50 PM	8/03/05	8/03/05 11:28 PM
0508005-005A	7/29/05 1:10 PM	8/03/05	8/03/05 2:43 AM	0508005-006A	7/29/05 12:30 PM	8/03/05	8/03/05 3:13 AM
0508005-007A	7/29/05 12:20 PM	8/03/05	8/03/05 3:42 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

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Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0508005

EPA Method: SW8015C	Extraction: SW3510C				BatchID: 17389			Spiked Sample ID: N/A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	106	106	0	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	98	94	3.98	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17389 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0508005-006B	7/29/05 12:30 PM	8/01/05	8/02/05 12:44 AM	0508005-007B	7/29/05 12:20 PM	8/01/05	8/01/05 11:28 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

Edd Clark & Associates, Inc.
Environmental Consultants

Chain of Custody Report

0508005

P.O. Box 3039, Rohnert Park, CA 94927
Tel: (707) 792-9500 (800) 474-1448 Fax: (707) 792-9504

E-mail in EDF for Upload to Geotracker: Yes ☒ No ☐ Initials

Samplers Signature: R. Johnson

EC&A job # 0369

Global I.D. #
T0609700517

Facility Name & Location:
Earth in Upheaval
198 High st
Sebastopol, CA

	Field Point Name	Date	Time	Sample ID (depth)	Sample Type	Media	# of Items	Analysis: FP	BTEX	TPH				Remarks
+	MW-1	7/27/05	1:20			W	3	x						
+	MW-2		1:00				3	x						
+	MW-3		12:40				3	x						
+	MW-4		12:50				3	x						
+	MW-5		1:10				3	x						
+	EW-1		12:30				3/1	x		x				
+	EW-2		12:20				3/2	x		x				

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
	8/1/05	1050			8/1/05	1205	
Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:

ICE/t° ✓
GOOD CONDITION ✓ APPROPRIATE CONTAINERS ✓
HEAD SPACE ABSENT ✓ PRESERVED IN LAB ✓
DECHLORINATED IN LAB ✓

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓			

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0508005 **ClientID: ECAR** **EDF: NO**

Report to:
Ronen Johnson
Edd Clark & Associates, Inc.
320 Professional Center Ste. 215
Rohnert Park, CA 94928
TEL: (707) 792-9500
FAX: (707) 792-9504
ProjectNo: #0369; Earth in Upheavel 198 High St
PO:

Bill to:
Accounts Payable
Edd Clark & Associates, Inc.
320 Professional Center Ste.215
Rohnert Park, CA 94928

Requested TAT: 5 days
Date Received: 08/01/2005
Date Printed: 08/01/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0508005-001	MW-1	Water	7/29/05 1:20:00 PM	☐	A														
0508005-002	MW-2	Water	7/29/05 1:00:00 PM	☐	A														
0508005-003	MW-3	Water	7/29/05 12:40:00	☐	A														
0508005-004	MW-4	Water	7/29/05 12:50:00	☐	A														
0508005-005	MW-5	Water	7/29/05 1:10:00 PM	☐	A														
0508005-006	EW-1	Water	7/29/05 12:30:00	☐	A	B													
0508005-007	EW-2	Water	7/29/05 12:20:00	☐	A	B													

Test Legend:

1	G-MBTEX_W	2	TPH(D)_W	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Maria Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.

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Website: www.mccampbell.com E-mail: main@mccampbell.com

Edd Clark & Associates, Inc. 320 Professional Center Ste. 215 Rohnert Park, CA 94928	Client Project ID: #0369; 198 High St. Sebastopor CA	Date Sampled: 11/07/05
		Date Received: 11/08/05
	Client Contact: Cole Hute	Date Reported: 11/11/05
	Client P.O.:	Date Completed: 11/11/05

WorkOrder: 0511182

November 11, 2005

Dear Cole:

Enclosed are:

1). the results of 7 analyzed samples from your **#0369; 198 High St. Sebastopor CA project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

Edd Clark & Associates, Inc. 320 Professional Center Ste. 215 Rohnert Park, CA 94928	Client Project ID: #0369; 198 High St. Sebastopor CA	Date Sampled: 11/07/05
		Date Received: 11/08/05
	Client Contact: Cole Hute	Date Extracted: 11/10/05
	Client P.O.:	Date Analyzed: 11/10/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0511182

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND	---	1.1	0.88	0.91	1.9	1	110
002A	MW-2	W	ND	---	ND	ND	ND	ND	1	109
003A	MW-3	W	ND,i	---	ND	ND	ND	ND	1	110
004A	MW-4	W	ND	---	ND	ND	ND	1.2	1	97
005A	MW-5	W	ND	---	ND	ND	ND	ND	1	98
006A	EW-1	W	320,b	---	ND	3.8	1.2	53	1	104
007A	EW-2	W	ND	---	ND	ND	ND	ND	1	98

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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Edd Clark & Associates, Inc.	Client Project ID: #0369; 198 High St. Sebastopor CA	Date Sampled: 11/07/05
		Date Received: 11/08/05
320 Professional Center Ste. 215	Client Contact: Cole Hute	Date Extracted: 11/08/05
Rohnert Park, CA 94928	Client P.O.:	Date Analyzed: 11/09/05

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0511182

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0511182-006B	EW-1	W	280,d,f,g	1	108
0511182-007B	EW-2	W	ND	1	104

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water | QC Matrix: Water | WorkOrder: 0511182

EPA Method: SW8021B/8015Cm | **Extraction: SW5030B** | **BatchID: 18949** | **Spiked Sample ID: 0511182-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex)£	ND	60	110	98	11.8	107	103	3.25	70 - 130	70 - 130
MTBE	ND	10	96.5	105	8.47	94	93	1.02	70 - 130	70 - 130
Benzene	ND	10	101	110	8.31	86.8	88	1.30	70 - 130	70 - 130
Toluene	ND	10	101	109	7.67	90.4	91.3	1.00	70 - 130	70 - 130
Ethylbenzene	ND	10	107	113	5.32	92.5	93.1	0.615	70 - 130	70 - 130
Xylenes	ND	30	96.7	100	3.39	95	94.7	0.351	70 - 130	70 - 130
%SS:	109	10	102	109	6.67	96	97	1.18	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 18949 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0511182-001A	11/07/05 12:50 PM	11/10/05	11/10/05 12:19 AM	0511182-002A	11/07/05 1:00 AM	11/10/05	11/10/05 12:49 AM
0511182-003A	11/07/05 1:35 AM	11/10/05	11/10/05 1:19 AM	0511182-004A	11/07/05 1:25 AM	11/10/05	11/10/05 8:10 AM
0511182-005A	11/07/05 1:45 AM	11/10/05	11/10/05 8:44 AM	0511182-006A	11/07/05 2:00 AM	11/10/05	11/10/05 9:17 AM
0511182-007A	11/07/05 1:10 AM	11/10/05	11/10/05 10:25 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
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Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0511182

EPA Method: SW8015C	Extraction: SW3510C				BatchID: 18930			Spiked Sample ID: N/A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	99.6	98.3	1.37	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	107	104	3.50	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 18930 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0511182-006B	11/07/05 2:00 AM	11/08/05	11/09/05 4:58 AM	0511182-007B	11/07/05 1:10 AM	11/08/05	11/09/05 5:37 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0511182 **ClientID: ECAR** **EDF: YES**

Report to:
Cole Hute
Edd Clark & Associates, Inc.
320 Professional Center Ste. 215
Rohnert Park, CA 94928

TEL: (707) 792-9500
FAX: (707) 792-9504
ProjectNo: #0369; 198 High St. Sebastopor CA
PO:

Bill to:
Accounts Payable
Edd Clark & Associates, Inc.
320 Professional Center Ste.215
Rohnert Park, CA 94928

Requested TAT: 5 days

Date Received: 11/08/2005
Date Printed: 11/08/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0511182-001	MW-1	Water	11/7/05 12:50:00	☐	A	A										
0511182-002	MW-2	Water	11/7/05 1:00:00 AM	☐	A											
0511182-003	MW-3	Water	11/7/05 1:35:00 AM	☐	A											
0511182-004	MW-4	Water	11/7/05 1:25:00 AM	☐	A											
0511182-005	MW-5	Water	11/7/05 1:45:00 AM	☐	A											
0511182-006	EW-1	Water	11/7/05 2:00:00 AM	☐	A		B									
0511182-007	EW-2	Water	11/7/05 1:10:00 AM	☐	A		B									

Test Legend:

1	G-MBTEX_W	2	PREDF REPORT	3	TPH(D)_W	4		5	
6		7		8		9		10	
11		12							

Prepared by: Juanita Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Edd Clark & Associates, Inc.
Environmental Consultants

0511182 eCar

Chain of Custody Report

P.O. Box 3039, Rohnert Park, CA 94927
Tel: (707) 792-9500 (800) 474-1448 Fax: (707) 792-9504

E-mail in EDF for Upload to Geotracker: Yes ☒ No ☐ Initials CJ

Samplers Signature: Cole Hunt

EC&A job # 0369

Global I.D. # T0609700517

Facility Name & Location: 198 High St Sebastopol CA

	Field Point Name	Date	Time	Sample ID (depth)	Sample Type	Media	# of Items	Analysis: TPHg BTEX	Analysis: TPHd	Remarks
+	MW-1	11/7/05	12:50		discrete	W	3	X		
+	MW-2		1:00				3	X		
+	MW-3		1:35				3	X		
+	MW-4		1:25				3	X		
+	MW-5		1:45				3	X		
(+)	EW-1		2:00				3/2	X	X	
+	EW-2	↓	1:10		↓	↓	3/2	X	X	

ICE/T _____
GOOD CONDITION ✓
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB _____
PRESERVATION: VOAs ✓ | O&G | METALS | OTHER

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
Col Hunt	11/7/05		VA 409	MC 281	11/8	16:15	Jramith Vallejos 11/08/05
Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:

Appendix C

Groundwater Field Logs

DAILY FIELD RECORD

Page 1 of _____

Project and Task Number: 0369	Date: 7/27/05
Project Name: Earth in Upheaval	Field Activity: Ground Water Monitor
Location: 198 High Street	Weather: Overcast, cool
Time of OVM Calibration:	

PERSONNEL

Name	Company	Time In	Time Out
R. Johnson	Edd Clark & Assoc		

DRUM ID	DESCRIPTION OF CONTENTS AND QUANTITY	LOCATION
6	Soil	W side of sled
5	H_2O	E side of sled
		S side of fence

TIME	DESCRIPTION OF WORK PERFORMED
	EW-1, 2, MW-3, 4, 3, 5, 1
10:00	Onsite open wells
10:30	Take Pre DTW
10:45	Begin purging
11:30	Allow for recharge
12:15	Begin sampling wells
1:30	closed & lock wells
1:45	Purge H_2O transfer
2:00	Back to office

Pre DTW

MW-1 - 21.54 MW-5 - 20.21

MW-2 - 20.65 EW-1 - 19.51

MW-3 - 17.66 EW-2 - 19.48

MW-4 - 19.98

Post DTW

MW-1 - 17.00

MW-2 - 16.00 EW-1 - 18.00

MW-3 - 15.00 EW-2 - 17.00

MW-4 - 17.00

MW-5 - 15.00

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FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: MW-1
Global ID: T0609700517	Well depth from TOC: 25'
Project location: 198 High Street, Sebastopol	Well diameter: ☒ 2" ☐ 4 " ☐ 6" ☐ Other:
Date: 7/27/05	Product level from TOC: ND
Time: 10:00	Water level from TOC: 21.54
Recorded by: R. Johnson	Screened interval: 10-25
Purge time (duration):	Well elevation (TOC): 94.38

WEATHER

Wind: 0-5 mph	Precip. in last 5 days: N

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☒ 2" well = 0.17 gal/ft 3.46	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: .6	
☐ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 1.8	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC mS (x1000)	Temp °F	Case Volumes/ Gallons	Appearance
12:10	7.19	434.2	63.1	1 / .6	Mild turb
12:11	6.96	446.9	62.5	2 / 1.2	No sheen
12:12	6.73	449.7	62.3	3 / 1.8	No odor
				/	

Notes:

Water level after purging below TOC: 80% of original water level below TOC: 4

Water level before sampling below TOC: 17.00

Appearance of sample: Time: 1:20

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☐ McCampbell Analytical ☐ Other:

EDD CLARK & ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: MW-2
Global ID: T0609700517	Well depth from TOC: 25'
Project location: 198 High Street, Sebastapool	Well diameter: ☒ 2" ☐ 4 " ☐ 6" ☐ Other:
Date: 7/27/05	Product level from TOC: ND
Time: 10:00	Water level from TOC: 20.69
Recorded by: R. Johnson	Screened interval: 10-25
Purge time (duration):	Well elevation (TOC):

WEATHER

Wind: 0-5 mph	Precip. in last 5 days: N

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☒ 2" well = 0.17 gal/ft 4.31	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: .7	
☐ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 2.1	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC (x1000)	Temp °F	Case Volumes/ Gallons	Appearance
11:45	6.82	8700	65.2	1 / .7	Low turb
11:46	6.76	9203	64.5	2 / 1.4	No odor
11:47	6.84	8057	64.4	3 / 2.1	No sheen
				/	

Notes:

Water level after purging below TOC: | 80% of original water level below TOC: 4

Water level before sampling below TOC: 16.00

Appearance of sample: | Time: 1:00

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☐ McCampbell Analytical ☐ Other:

EDD CLARK & ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: MW-3
Global ID: T0609700517	Well depth from TOC: 25'
Project location: 198 High Street, Sebastapool	Well diameter: ☒ 2" ☐ 4 " ☐ 6" ☐ Other:
Date: 7/27/05	Product level from TOC: ND
Time: 10:00	Water level from TOC: 17.66
Recorded by: R. Johnson	Screened interval: 10-25
Purge time (duration):	Well elevation (TOC): 90.26

WEATHER

Wind: 0-5 mph	Precip. in last 5 days: N

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☒ 2" well = 0.17 gal/ft 7.34	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: 1.2	
☐ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 3.6	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC µS (x1000)	Temp °F	Case Volumes/ Gallons	Appearance
11:18	7.71	712.2	61.1	1 / 1.2	Low turb
11:19	7.62	671.7	60.1	2 / 2.4	No sheen
11:20	7.60	654.8	60.1	3 / 3.6	No odor
				/	

Notes:

Water level after purging below TOC:	80% of original water level below TOC: 4
Water level before sampling below TOC: 15.00	
Appearance of sample:	Time: 12:40

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☐ McCampbell Analytical ☐ Other:

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FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: MW-4
Global ID: T0609700517	Well depth from TOC: 25'
Project location: 198 High Street, Sebastopol	Well diameter: ☐ 2" ☐ 4 " ☐ 6" ☐ Other:
Date: 7/27/05	Product level from TOC:
Time: 10:00	Water level from TOC: 19.98
Recorded by: R. Johnson	Screened interval: 10-25
Purge time (duration):	Well elevation (TOC): 92.57

WEATHER

Wind: 0-5 mph	Precip. in last 5 days: N

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☒ 2" well = 0.17 gal/ft 5.62	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: .9	
☐ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 2.7	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC µS (x1000)	Temp °F	Case Volumes/ Gallons	Appearance
11:33	6.22	859.0	63.5	1 / .9	No color
11:34	6.28	910.9	63.5	2 / 1.8	No sheen
11:35	6.36	918.8	62.7	3 / 2.7	Mild turb.
				/	

Notes:

Water level after purging below TOC: | 80% of original water level below TOC: 4

Water level before sampling below TOC: 17.00

Appearance of sample: Time: 12:50

☐ Bailer:	Type:	GPM:	☒ Pump: ES40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☐ McCampbell Analytical ☐ Other:

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FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: MW-5
Global ID: T0609700517	Well depth from TOC: 25'
Project location: 198 High Street, Sebastopol	Well diameter: ☒ 2" ☐ 4 " ☐ 6" ☐ Other:
Date: 7/27/05	Product level from TOC: ND
Time: 10:00	Water level from TOC: 20.21
Recorded by: R. Johnson	Screened interval:
Purge time (duration):	Well elevation (TOC):

WEATHER

Wind: 0-5 mph	Precip. in last 5 days: N

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☒ 2" well = 0.17 gal/ft 4.79	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: .8	
☐ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 2.4	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC (x1000)	Temp °F	Case Volumes/ Gallons	Appearance
11:57	7.45	698.2	64.5	1 / .8	low turb
11:58	7.37	661.5	62.6	2 / 1.6	No odor
12:00	7.25	770.5	62.3	3 / 2.4	No sheen
				/	

Notes:

Water level after purging below TOC:	80% of original water level below TOC: Y
Water level before sampling below TOC: 15.00	
Appearance of sample:	Time: 1:10

☐ Bailer:	Type:	GPM:	☒ Pump: ES40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☐ McCampbell Analytical ☐ Other:

EDD CLARK & ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: EW-1
Global ID: T0609700517	Well depth from TOC: 30'
Project location: 198 High Street, Sebastapool	Well diameter: ☐ 2" ☒ 4 " ☐ 6" ☐ Other:
Date: 7/27/05	Product level from TOC: D
Time: 10:00	Water level from TOC: 14.48
Recorded by: R. Johnson	Screened interval:
Purge time (duration):	Well elevation (TOC):

WEATHER

Wind: 0-5 mph	Precip. in last 5 days: N

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☐ 2" well = 0.17 gal/ft	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: 7	
☒ 4" well = 0.66 gal/ft 10.52	☐ " well = gal/ft	Total gallons removed: 21	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC µS (x1000)	Temp °F	Case Volumes/ Gallons	Appearance
10:45	7.05	914.3	62.1	1 / 7	Weak "HC" odor
10:47	6.68	1145	61.6	2 / 14	No sheen
10:50	7.13	1199	61.3	3 / 21	Mild turb
				/	

Notes:

Water level after purging below TOC: 80% of original water level below TOC: 4

Water level before sampling below TOC: 18.00

Appearance of sample: Time: 12:30

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☐ McCampbell Analytical ☐ Other:

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ENVIRONMENTAL CONSULTANTS

FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: EW-2
Global ID: T0607700517	Well depth from TOC: 30'
Project location: 198 High Street, Sebastapool	Well diameter: ☐ 2" ☒ 4 " ☐ 6" ☐ Other:
Date: 7/27/05	Product level from TOC: ND
Time: 10:00	Water level from TOC: 19.51
Recorded by: R. Johnson	Screened interval:
Purge time (duration):	Well elevation (TOC):

WEATHER

Wind: 0-5 mph	Precip. in last 5 days: N

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☐ 2" well = 0.17 gal/ft	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: 7	
☒ 4" well = 0.66 gal/ft 10.49	☐ " well = gal/ft	Total gallons removed: 21	Well volumes removed: 4

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC µS (x1000)	Temp °F	Case Volumes/ Gallons	Appearance
10:53	5.71	1034	62.0	1 / 7	Mild turb
11:01	6.71	942.8	61.8	2 / 14	No odor
11:08	6.90	933.1	61.3	3 / 21	No sheen
				/	

Notes:

Water level after purging below TOC:	80% of original water level below TOC: 4
Water level before sampling below TOC: 17	
Appearance of sample:	Time: 12:30

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☐ McCampbell Analytical ☐ Other:

DAILY FIELD RECORD

Page 1 of _____

Project and Task Number: 0369	Date: 11/7/05
Project Name: EARTH IN UPTOWN	Field Activity: GROUND WATER MONITOR
Location: 198 HIGH ST	Weather:
Time of OVM Calibration:	

PERSONNEL

Name	Company	Time In	Time Out
CLIFF HUFF	ECHA		

DRUM ID	DESCRIPTION OF CONTENTS AND QUANTITY	LOCATION

TIME	
	ORDER MW-1/MW-2/EW-2/MW-4/MW-3 MW-5/EW-1
	Load
	Depart
10:20	On Site, open all wells Set up Decon
10:47	TAKE DTW'S MW-1-21.68 MW-5 20.37 MW-2-20.85 EW-1 19.64 MW-3 17.84 EW-2 19.61 MW-4 20.12
11:20	Calc GWF logs and begin Purging wells in order
	Allow Time for Recharge
	TAKE Post Purge DTW'S
12:50	Begin Sampling wells in order
2:30	Close and lock wells
2:35	Depart

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ENVIRONMENTAL CONSULTANTS

FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0364	Field point name: MW-1
Global ID: T0600702517	Well depth from TOC: 25
Project location: 198 HIGH ST	Well diameter: ☒ 2" ☐ 4 " ☐ 6" ☐ Other:
Date: 11-7-05	Product level from TOC: NO
Time:	Water level from TOC: 21.68
Recorded by: COLE H	Screened interval: 10-25
Purge time (duration):	Well elevation (TOC): 94.38

WEATHER

Wind: 0 - 5 mph	Precip. in last 5 days: yes

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☒ 2" well = 0.17 gal/ft 3.32	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume:	.56
☐ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 1.2	Well volumes removed: 2

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC (x1000)	Temp °F	Case Volumes/ Gallons	ORP	Appearance
	6.61	477.5	63.4	1 / .6	200	Low Turb Noodor No Sheen
	6.47	459.1	62.9	2 / 1.2	214	
				3 / 1.8		
				/		

Notes: Ran dry after 2 cases

Water level after purging below TOC: DRY	80% of original water level below TOC: yes
Water level before sampling below TOC:	
Appearance of sample:	Time: 12:50

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☒ McCampbell Analytical ☐ Other:

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FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: MW-2
Global ID: T0600702517	Well depth from TOC: 25
Project location: 198 HIGH ST	Well diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other:
Date: 11-7-05	Product level from TOC: ND
Time:	Water level from TOC: 20.85
Recorded by: COLE H	Screened interval: 10-25
Purge time (duration):	Well elevation (TOC): 93.15

WEATHER

Wind: 0 - 5 mph	Precip. in last 5 days: yes

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☒ 2" well = 0.17 gal/ft 4.15	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: .71	
☐ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 2.1	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC (x1000)	Temp °F	Case Volumes/ Gallons	orp	Appearance
	7.04	813.5	65.1	1 / 0.7	188	Low turb NO odor no sheen
	6.99	804.7	65.9	2 / 1.4	182	
	7.09	768.2	66.0	3 / 2.1	172	
				/		

Notes:

Water level after purging below TOC:	80% of original water level below TOC: yes
Water level before sampling below TOC: 20.88	
Appearance of sample:	Time: 1:00

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☒ McCampbell Analytical ☐ Other:

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FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0364	Field point name: MW-3
Global ID: T0600702517	Well depth from TOC: 25
Project location: 198 HIGH ST	Well diameter: ☒ 2" ☐ 4 " ☐ 6" ☐ Other:
Date: 11-7-05	Product level from TOC: NO
Time:	Water level from TOC: 17.84
Recorded by: COLE H	Screened interval: 10-25
Purge time (duration):	Well elevation (TOC): 90.26

WEATHER

Wind: 0 - 5 mph	Precip. in last 5 days: YES

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☒ 2" well = 0.17 gal/ft 7.16	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: 1.22	
☐ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 3.6	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC uS (x1000)	Temp °F	Case Volumes/ Gallons	ORP	Appearance
	7.45	606.5	61.1	1 / 1.2	141	Low Turb No Odor No Sheen
	7.28	605.7	60.8	2 / 2.4	144	
	7.23	628.8	60.7	3 / 3.6	147	
				/		

Notes:

Water level after purging below TOC:	80% of original water level below TOC: YES
Water level before sampling below TOC: 17.89	
Appearance of sample:	Time: 1:35

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☒ McCampbell Analytical ☐ Other:

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FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: MW-4
Global ID: T0600702517	Well depth from TOC: 25
Project location: 198 HIGH ST	Well diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other:
Date: 11-7-05	Product level from TOC: NO
Time:	Water level from TOC: 20.12
Recorded by: COLE H	Screened interval: 10-25
Purge time (duration):	Well elevation (TOC): 92.57

WEATHER

Wind: 0 - 5 mph	Precip. in last 5 days: YES

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☐ 2" well = 0.17 gal/ft 4.88	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: 83	
☐ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 2.4	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC (x1000)	Temp °F	Case Volumes/ Gallons	ORP	Appearance
	7.22	824.5	63.4	1 / .8	149	Low Turb, No odor no sheen
	6.96	887.9	63.6	2 / 1.6	153	
	7.12	740.7	63.5	3 / 2.4	152	
				/		

Notes:

Water level after purging below TOC: 80% of original water level below TOC: YES

Water level before sampling below TOC: 20.15

Appearance of sample: Time: 1:25

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 (2)
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☒ McCampbell Analytical ☐ Other:

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FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: MW-5
Global ID: T0600702517	Well depth from TOC: 25
Project location: 198 HIGH ST	Well diameter: ☒ 2" ☐ 4 " ☐ 6" ☐ Other:
Date: 11-7-05	Product level from TOC: ND
Time:	Water level from TOC: 20.37
Recorded by: CORE H	Screened interval: 10-25
Purge time (duration):	Well elevation (TOC): 92.98

WEATHER

Wind: 0 - 5 mph	Precip. in last 5 days: YES

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☒ 2" well = 0.17 gal/ft 4.63	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume:	4.79
☐ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 2.4	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC uS (x1000)	Temp °F	Case Volumes/ Gallons	ORP	Appearance
	6.65	530.9	63.0	1 / 4.8	147	Low Turbidity Odor NO Sheen
	6.67	660.6	62.9	2 / 1.6	151	
	6.89	764.0	63.0	3 / 2.4	147	
				/		

Notes:

Water level after purging below TOC:	80% of original water level below TOC: YES
Water level before sampling below TOC: 20.41	
Appearance of sample:	Time: 1:45

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☐ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☒ McCampbell Analytical ☐ Other:

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FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: EW-1
Global ID: T0600702517	Well depth from TOC: 30
Project location: 198 HIGH ST	Well diameter: ☐ 2" ☒ 4" ☐ 6" ☐ Other:
Date: 11-7-05	Product level from TOC: ND
Time:	Water level from TOC: 19.64
Recorded by: CORE H	Screened interval: 10-30
Purge time (duration):	Well elevation (TOC): ?

WEATHER

Wind: 0 - 5 mph	Precip. in last 5 days: YES

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☐ 2" well = 0.17 gal/ft	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: 6.94	
☒ 4" well = 0.66 gal/ft 10.36	☐ " well = gal/ft	Total gallons removed: 20.4	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC (x1000)	Temp °F	Case Volumes/ Gallons	orp	Appearance
	6.83	729.8	62.6	1 / 6.8	61	Mid Turb Low odor NO Sheen
	7.01	775.3	62.8	2 / 13.6	34	
	7.03	798.8	62.6	3 / 20.4	46	
				/		

Notes:

Water level after purging below TOC:	80% of original water level below TOC: YES
Water level before sampling below TOC: 19.71	
Appearance of sample:	Time: 2:00

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☒ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☒ McCampbell Analytical ☐ Other:

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FIELD LOG

☒ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☐ WELL DEVELOPMENT

Project No: 0369	Field point name: BW-2
Global ID: T0600702517	Well depth from TOC: 30
Project location: 198 HIGH ST	Well diameter: ☐ 2" ☒ 4 " ☐ 6" ☐ Other:
Date: 11-7-05	Product level from TOC: ND
Time:	Water level from TOC: 19.61
Recorded by: COLE H	Screened interval: 10-30
Purge time (duration):	Well elevation (TOC):

WEATHER

Wind: 0 - 5 mph	Precip. in last 5 days: yes

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☐ 2" well = 0.17 gal/ft	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume: 6.86	
☒ 4" well = 0.66 gal/ft 10.39	☐ " well = gal/ft	Total gallons removed: 20.7	Well volumes removed: 3

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC (x1000) uS	Temp °F	Case Volumes/ Gallons	orp	Appearance
	7.27	688.6	62.8	1 / 6.9	139	med Turb Nsodor NOSheen
	7.21	646.5	62.7	2 / 13.8	137	
	7.22	678.6	62.3	3 / 20.7	148	
				/		

Notes:

Water level after purging below TOC:	80% of original water level below TOC: yes
Water level before sampling below TOC: 19.68	
Appearance of sample:	Time: 1:10

☐ Bailer:	Type:	GPM:	☒ Pump: ES-40	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☒ TPHg	☒ TPHd	☐ TPH	☒ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☒ McCampbell Analytical ☐ Other:

DAILY FIELD RECORD

Project and Task Number: 0369	Date: 7/25/05
Project Name: Earth & Upheval	Field Activity: Well Development
Location: 198 High St	Weather: Sunny, Calm, Warm
Time of OVM Calibration:	

PERSONNEL

Name	Company	Time In	Time Out
R. Johnson	Edd Clark & Assoc		

DRUM ID	DESCRIPTION OF CONTENTS AND QUANTITY	LOCATION
2	H2O left onsite - used drums	Next to sled on S. end of property

TIME	DESCRIPTION OF WORK PERFORMED
2:17	Arrive on site, open wells
2:22	Set up decon station
2:32	Begin well development EW-2
2:45	1st round of purge EW-2
3:00	Begin well development EW-1
3:15	Begin purging EW-1
3:45	Begin 2nd round well development EW-2
4:00	Begin 2nd round of purging EW-2
4:20	close & lock wells, head back to office - Take storage Tank samples

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ENVIRONMENTAL CONSULTANTS

FIELD LOG

☐ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☒ WELL DEVELOPMENT

Project No: 0369	Field point name: EW-1
Global ID: T0609700517	Well depth from TOC: 30'
Project location: 198 High Street	Well diameter: ☐ 2" ☐ 4 " ☐ 6" ☐ Other:
Date: 7/25/05	Product level from TOC: ND
Time: 2:17	Water level from TOC: —
Recorded by: R. Johnson	Screened interval: 10-30'
Purge time (duration):	Well elevation (TOC):

WEATHER

Wind: 0-5 mph	Precip. in last 5 days: N

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☐ 2" well = 0.17 gal/ft	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume:	
☒ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 20 gal	Well volumes removed:

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC (x1000)	Temp °F	Case Volumes/ Gallons	Appearance
				1 /	
				2 /	
				3 /	
				/	

Notes: 20 gal total removed, well ran clear @ 20 gal

Water level after purging below TOC:	80% of original water level below TOC: —
Water level before sampling below TOC: —	
Appearance of sample:	Time: —

☐ Bailer:	Type:	GPM:	☒ Pump: ES 4/0	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☐ TPHg	☐ TPHd	☐ TPH	☐ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☐ McCampbell Analytical ☐ Other:

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ENVIRONMENTAL CONSULTANTS

FIELD LOG

☐ GROUNDWATER	☐ SURFACE WATER	☐ DOMESTIC WATER	☐ IRRIGATION WATER	☒ WELL DEVELOPMENT

Project No: 0369	Field point name: EW-2
Global ID: T0609700517	Well depth from TOC: 30'
Project location: 198 High Street	Well diameter: ☐ 2" ☒ 4 " ☐ 6" ☐ Other:
Date: 7/25/05	Product level from TOC: ND
Time: 2:17	Water level from TOC: —
Recorded by: R. Johnson	Screened interval: 10-30'
Purge time (duration):	Well elevation (TOC):

WEATHER

Wind: 0-5 mph	Precip. in last 5 days: N

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

☐ 2" well = 0.17 gal/ft	☐ 6" well = 1.47 gal/ft	Gallons in 1 well volume:	
☒ 4" well = 0.66 gal/ft	☐ " well = gal/ft	Total gallons removed: 40gal	Well volumes removed:

CALIBRATION

Parameter	Time	Calibration	Before Sampling	Time	After Sampling
EC:					

FIELD MEASUREMENTS

Time	pH	EC (x1000)	Temp °F	Case Volumes/ Gallons	Appearance
				1 /	
				2 /	
				3 /	
				/	

Notes: 40 gal removed total, well ran semi-clear very low turb by 40 gal.

Water level after purging below TOC:	80% of original water level below TOC: —
Water level before sampling below TOC: —	
Appearance of sample:	Time: —

☐ Bailer:	Type:	GPM:	☒ Pump: ESH O	Type: Submersible	GPM: 1 - 2
☐ Dedicated:	Type:	GPM:	Decontamination method: Liquinox wash, double rinse		

Sample analysis:	☐ TPHg	☐ TPHd	☐ TPH	☐ BTEX	☐ 7 oxygenates	☐ Lead scavengers	☐ VOCs	☐ Nitrates
EPA Method:								

Other:

LABORATORY: ☐ McCampbell Analytical ☐ Other: